

**EXHIBIT A**

## **CURRICULUM VITAE**

**ANN MARIE SCHMIDT**

OFFICE ADDRESS                      Department of Surgery  
Columbia University Medical Center  
630 W. 168th Street  
P&S 17-501  
New York, N.Y.      10032

HOME ADDRESS                      242 Haven Road  
Franklin Lakes, New Jersey      07417

TELEPHONE NUMBERS              Work:      (212) 305-6406  
Home:      (201) 405-0875  
email: ams11@columbia.edu

SOCIAL SECURITY #                  153-56-4871

DATE OF BIRTH                      2/18/57

MARITAL STATUS                    Married, one child

### **EDUCATION**

<b><u>University</u></b>	<b><u>Degree/Field</u></b>	<b><u>Year</u></b>
New York University Washington Square School of the Arts & Sciences New York, New York	B.A. Summa Cum Laude Biology & History	1979
New York University School of Medicine New York, New York	M.D. with Honors	1983

### **AWARDS AND HONORS**

Dean's List	1975-1979
Phi Beta Kappa	1978
Alpha Omega Alpha	1982

David M. Stern, et al.  
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Exhibit A

Juvenile Diabetes Foundation Fellowship 1990-1992

Harold and Golden Lamport Prize 1998  
for Excellence in Clinical Research  
(Columbia University)

American Society of Clinical  
Investigation 1999

Established Investigator of the  
American Heart Association 1999

Recipient, Burroughs Wellcome Fund  
Clinical Scientist Award in  
Translational Research 1999

Schunk- Prize for Medicine 1999  
Justus-Liebig-University  
Gießen, Germany

Distinguished Lecturer 2000  
Department of Oral Biology  
State University of New York  
at Buffalo School of Dentistry

Co-director, Juvenile Diabetes 2000-2002  
Research Foundation International  
Center for Complications at  
Columbia University

Director, Juvenile Diabetes 2002-2003  
Research Foundation International  
Center for Complications at  
Columbia University

Keynote Lecturer, Banting and Best 2002  
Diabetes Centre Annual Scientific  
Day, University of Toronto,  
Toronto, Canada

Opponent in the Dissertation of the Degree 2002  
of Doctor of Philosophy by Henri Huttunen,  
Dept of Biochemistry, University of  
Helsinki, Helsinki, Finland

Mary Jane Kugel Award 2003  
Juvenile Diabetes Research  
Foundation International

Gerald and Janet Carrus  
Professor of Surgical Science

October, 2003

Director, Juvenile Diabetes  
Research Foundation International  
Center for Complications at  
Columbia University

2004-2006

**SPECIALTY BOARDS**

Internal Medicine, American                      1988  
Board of Internal Medicine

**LICENSURE**

New York State Medical License  
Number:    159704

**PROFESSIONAL MEMBERSHIPS**

American Society of Hematology  
American Diabetes Association  
American Heart Association, Thrombosis Council  
American Society of Clinical Investigation  
Society for Neuroscience  
American Association for Cancer Research

**RESEARCH AND/OR PROFESSIONAL EXPERIENCE**

Intern, Internal Medicine, New York University Medical Center,  
Bellevue Hospital Center, July, 1983 - June, 1984.

Resident, Internal Medicine, New York University Medical Center,  
Bellevue Hospital Center, July, 1984 - June, 1987.

Chief Resident, Internal Medicine, New York University Medical  
Center, Bellevue Hospital Center, July, 1987- June, 1988.

Fellow, Hematology, New York University Medical Center, Bellevue  
Hospital Center, July, 1988 - June, 1989.

Fellow, Medical Oncology, New York University Medical Center,  
Bellevue Hospital Center, July, 1989 - June, 1990.

Teaching Assistant, Internal Medicine, New York University School  
of Medicine, New York, New York, 1983-1990.

Post-Doctoral Research Fellow, Columbia University, Department of  
Physiology and Cellular Biophysics, Laboratory of Dr. David Stern,  
July, 1990 - June, 1993.

Assistant Professor, Columbia University, Department of Medicine,  
Division of Molecular Medicine, July, 1993 - November, 1998.

Assistant Professor, Columbia University, Department of Surgery,  
January 1995- November 1998.

Associate Professor, Division of Surgical Science, Department of  
Surgery, with tenure, December 1, 1998 - June 30, 2003.

Division Chief, Division of Surgical Science, Department of  
Surgery, June, 2002 - present

Professor, Division of Surgical Science, Department of Surgery,  
July 1, 2003 - present

Gerald and Janet Carrus Professor of Surgical Science, October,  
2003-present

**COMMITTEE MEMBERSHIPS, MEETING CHAIRMANSHIPS, AND PLENARY SESSIONS:**

1996 Co-chairperson: Session on "Featured Research - Oxidant  
Signaling and Gene Regulation", American Heart Association,  
National Meeting, New Orleans, Louisiana

1997 Co-chairperson: Session on Diabetes and Endothelial  
Dysfunction, Satellite Symposium of Diabetes and  
Atherosclerosis, Lyon, France

1997 Co-chairperson: Session on "Animal Models of  
Disease/Diabetes," American Heart Association, National  
Meeting, Orlando, Florida

1998 Co-chairperson: Session on "Diabetic Complications," American  
Diabetes Association, 58th Scientific Sessions, Chicago,  
Illinois

1999 Co-chairperson: Session on "Macrophage Activation and  
Scavenger Receptor Biology," Keystone conference, Inflammatory  
Paradigms and the Vasculature, Santa Fe, New Mexico

1999 Rapporteur, Session on "Vascular permeability in diabetes,"  
Endothelial Cell Function in Diabetes Mellitus, The Wellcome  
Trust Genome Campus, Hinxton, Cambridgeshire, United Kingdom

1999 Chairperson, Session on "Emerging Mechanisms of Diabetic  
Complications," American Diabetes Association, 59th Scientific  
Sessions, San Diego, California

1999 Co-chairperson, NIH/NIDCR-sponsored workshop on Diabetes and  
Oral Health, Washington, D.C.

Session chair, NIH/NIDCR-sponsored workshop on Diabetes and Oral Health, "Diabetes and Wound Healing," Washington, D.C.

2000 Co-Chairperson, Session on "Mechanisms and Diabetes and Atherosclerosis," American Heart Association, National Meeting, New Orleans, Louisiana

2001 Co-Organizer, Physicians & Surgeons Biomedical Sciences Symposium, "Angiogenesis," Arden House, Harriman, New York, July, 2001 &

Session chair: Tumor Biology, Key Roles for Angiogenesis and Lymphangiogenesis

2001 Session chair, 6th EASD/JDRF Oxford Workshop on Molecular and Genetic Aspects of the Vascular Complications of Diabetes, session on Mechanisms of Vascular Disease, Keble College, Oxford, UK, August, 2001

2001 Co-Organizer, "The Diabetes Summit: A New Patient Treatment Regimen in Cardiovascular Disease", Anaheim, California, November, 2001

2002 Co-Chairperson, Annual Meeting of the American Heart Association, Session on Featured Research Session: Molecular Mechanisms in Atherosclerosis I; Subspecialty: Atherosclerosis/Hemostasis/Lipid Disorders, Chicago, Illinois, November, 2002.

2003 Discussion Leader, "How can we foster development of surrogate markers useful for clinical trials of potential new therapies?", Diabetes Mellitus Interagency Coordinating Committee, National Institutes of Health, Bethesda, Maryland

2003 Invited Participant, Working Group on the Cardiovascular Complications of Type 1 Diabetes, Sponsored by the Juvenile Diabetes Research Foundation International and the National Institutes of Health (NIDDK and NHLBI), Bethesda, Maryland

2003 Session chair, Adhesion Molecules and chemokines in atherogenesis, Workshop on Atherosclerosis: Molecular Basis of an Inflammatory Disease, Casteel Vaalsbroek, Vaals/Aachen, Germany

2003 Co-organizer, "Diabetic Complications: Progress through Animal Models," Sponsored by the National Institutes of Health (NIDDK, NHLBI, NINDS, NEI) & JDRFI, Bethesda, Maryland

2003 Session chair & discussion leader, "The Translation Pipeline: from the bench to the bedside,"

"Diabetic Complications: Progress through Animal Models,"  
Sponsored by the National Institutes of Health (NIDDK,  
NHLBI, NINDS, NEI) & JDRFI, Bethesda, Maryland

- 2003 Co-Chairperson, Session on "Myocardial Ischemia-Associated Gene Expression," American Heart Association, National Meeting, Orlando, Florida
- 2004 Co-Chairperson, Session on "Inflammation & Tissue Injury," 12th International Congress of Immunology and 4th Annual Conference of FOCIS (Federation of Clinical Immunology Societies), Montreal, Canada
- 2004 Invited Participant, Diabetic Nephropathy Research Retreat, Sponsored by the National Institutes of Health and the American Society of Nephrology, Washington, D.C.
- 2005 Invited Participant, Meeting on the Special Statutory Funding Program for Type 1 Diabetes Research, Bethesda, Maryland
- 2005 Invited Participant, Meeting on Drug Screening for Hyperglycemic Cellular Injury, NIDDK/JDRF, Bethesda, Maryland

#### **EDITORIAL SERVICE**

- 1997 Associate (Guest) Editor, Journal of Gerontology
- 1998 Guest Editor, Investigative Ophthalmology and Visual Sciences
- 2003- Member, Editorial Board, Journal of Biological Chemistry
- 2004- Member, Editorial Board, Circulation
- 2004- Member, Editorial Board, Circulation Research

#### **REVIEW COMMITTEES**

- 1997 National Institutes of Health/National Institute of Dental Research, ad hoc reviewer, Special Emphasis Panel
- 1997 Wellcome Trust, London, England
- 1997 NIH/DRG: National Institutes of Aging, ad hoc reviewer
- 1998 NIH/DRG: National Institutes of Aging, ad hoc reviewer

1998 Special Review, University of Washington Diabetes Endocrinology Research Center (DERC) New Investigator Awards

1998 Reviewer, National Institutes of Health, Request for Applications: "Pathogenesis and Therapy of Diabetic Complications"

1998 Endocrine Fellows Foundation, ad hoc reviewer

1999 Reviewer, Special Emphasis Panel, Program Project Grant, National Institute of Dental and Craniofacial Research

1999 Reviewer, Special Emphasis Panel, Program Project Grants, Mechanisms of Vascular Disease, National Heart, Lung and Blood Institute

1999 NIH/DRG: National Institutes of Aging, ad hoc reviewer

1999 Juvenile Diabetes Foundation International, ad hoc reviewer

1999 Reviewer, Special Emphasis Panel, National Institutes of Health, Request for Applications: "Pilot studies for new therapies for type 1 diabetes and its complications"

1999 Member, Vascular Biology I Study Section, American Heart Association

2000 Member, NIH/DRG National Institutes of Aging: Biology of Aging - B

2000 National Institutes of Dental and Craniofacial Research, ad hoc reviewer

2000 Member, NIH Advisory Committee, Use of FY2001 Balanced Budget Act Funds for Type 1 Diabetes Research

2000-

2002 Member, Juvenile Diabetes Foundation International Medical Science Research Committee: Group III: Complications

2000 NIH/NIDDK/DRG: ad hoc reviewer

2001 Special Emphasis Panel (Chairperson), National Institute of Neurological Disorders and Stroke

2002 Ad hoc Member, Pathology A Study Section, Center for Scientific Review, National Institutes of Health

2002 Member, NIH/NIDDK Advisory Committee, Use of Special Congressional Funds for Type 1 Diabetes Research



- 2002 Reviewer, National Institutes of Aging, Site Visit and Review of Program Project Application
- 2002 Member, Ad hoc study section in response to a "Request for Applications," Bench to Bedside Therapy and Prevention of Diabetes and Its Complications, National Institutes of Health, NIDDK
- 2002-Chair, Biology of Aging Study Section, NIA-B  
2005
- 2003 Chair, Special Emphasis Panel, National Institutes of Health
- 2004 Special Emphasis Panel, National Institute of Diabetes and Digestive and Kidney Diseases, RFA DK-03-019 "Bench to Bedside Research on type 1 diabetes and its complications"
- 2004 Special Review Committee, National Heart Lung & Blood Institute, Program Project Application Review

## BIBLIOGRAPHY

### I. Peer-Reviewed.

1. Blum, R.H., Cooper, J., Schmidt, A.M., Ashinoff, R., Collins, A., Wernz, J.C., Speyer, J.L., Boyd, A., and Muggia, F.M. Cisplatin and Vinblastine chemotherapy for metastatic non-small cell carcinoma followed by radiation in patients with regional disease. Cancer Treat. Rep. 70:333-337, 1986.
2. Schmidt, A.M., Blum, R.H., Clayton, M., Speyer, J.L., Bottino, J., and Muggia, F.M. Phase II trial of cyclophosphamide and cis-platinum for non-small cell bronchogenic carcinoma. Am. J. Clin Oncol. 7:725-727, 1984.
3. Schmidt, A.M., Vianna, M., Gerlach, M., Brett, J., Ryan, J., Kao, J., Esposito, C., Hegarty, H., Hurley, W., Clauss, M., Wang, F., Pan, Y.C., Tsang, T.C., and Stern, D. Isolation and characterization of binding proteins for advanced glycosylation endproducts from lung tissue which are present on the endothelial cell surface. J. Biol. Chem. 267:14987-14997, 1992.
4. Neeper, M., Schmidt, A.M., Brett, J., Yan, S.D., Wang, F., Pan, Y.C., Elliston, K., Stern, D., and Shaw, A. Cloning and expression of RAGE: a cell surface receptor for advanced

glycosylation end products of proteins. J. Biol. Chem. 267: 14998-15004, 1992.

5. Shen, H., Clauss, M., Kao, J., Ryan, Schmidt, A.M., Tijburg, P., Border, L, and Stern, D. Characterization of vascular permeability factor/vascular endothelial growth factor receptors on mononuclear phagocytes. Blood 81:2767-2773, 1993.
6. Schmidt, A.M., Yan, S.D., Brett, J., Mora, R., and Stern, D. Regulation of mononuclear phagocyte migration by cell surface binding proteins for advanced glycosylation endproducts. J. Clin. Invest. 92:2155-2168, 1993.
7. Brett, J., Schmidt, A-M., Zou, Y-S., Yan, S-D., Weidman, E., Pinsky, D., Neeper, M., Przysiecki, M., Shaw, A., Migheli, A., and Stern, D. Tissue distribution of the receptor for advanced glycation endproducts (RAGE): expression in smooth muscle, cardiac myocytes, and neural tissue in addition to the vasculature. Am. J. Pathol. 143:1699-1712, 1993.
8. Schmidt, A-M., Mora, R., Cao, R., Yan, S-D., Brett, J., Ramakrishnan, R., Tsang, T-C., Simionescu M., and Stern, D. The endothelial cell binding site for advanced glycation endproducts consists of a complex: an integral membrane protein and a lactoferrin-like polypeptide. J. Biol. Chem. 269:9882-9888, 1994.
9. Yan, S-D., Schmidt A-M., Anderson, G., Zhang, J., Brett, J., Zou, Y-S., Pinsky, D., and Stern, D. Enhanced cellular oxidant stress by the interaction of advanced glycation endproducts with their receptors/binding proteins. J. Biol. Chem. 269:9889-9897, 1994.
10. Schmidt, A-M., Hasu, M., Popov, D., Zhang, J-H., Yan, S-D., Brett, J., Cao, R., Kuwabara, K., Costache, G., Simionescu, N., Simionescu, M., and Stern, D. The receptor for Advanced Glycation Endproducts (AGEs) has a central role in vessel wall interactions and gene activation in response to AGEs in the intravascular space. PNAS(USA) 91:8807-8811, 1994.
11. Wautier, J-L., M-P. Wautier, A-M. Schmidt, G. M. Anderson, C. Zoukourian, L. Capron, O. Chappey, S-D. Yan, J. Brett, P-J. Guillausseau, and D. Stern. Advanced glycation endproducts (AGEs) on the surface of diabetic red cells bind to the vessel wall via a specific receptor inducing oxidant stress in the vasculature: a link between surface-associated AGEs and diabetic complications. PNAS(USA) 91:7742-7746, 1994

12. Yan, S-D., X. Chen, A-M. Schmidt, J. Brett, G. Godman, C.W. Scott, C. Caputo, T. Frappier, S-H. Yen, and D. Stern. The presence of glycated tau in Alzheimer's disease: a mechanism for induction of oxidant stress. PNAS(USA) 91:7787-7791, 1994.
13. Kuwabara, K., D. Pinsky, A-M. Schmidt, C. Benedict, J. Brett, S. Ogawa, M. Broekman, A. Marcus, R. Sciacca, M. Michalak, F. Wang, Y-C. Pan, S. Grunfeld, S. Patton, T. Malinski, D. Stern, and J. Ryan. Calreticulin, an antithrombotic agent which binds vitamin K-dependent coagulation factors, stimulates endothelial nitric oxide production, and limits thrombosis in canine coronary arteries. J. Biol. Chem. 270:8179-8187, 1995.
14. Ritthaler, U., Y.Deng, Y. Zhang, J. Greten, M. Abel, J. Allenberg, G. Otto, H. Roth, A. Bierhaus, R. Ziegler, A-M. Schmidt, R. Waldherr, P. Wahl, D. Stern, and P. Nawroth. Expression of receptors for advanced glycation endproducts in peripheral occlusive vascular disease. Am. J. Pathol. 146: 688-694, 1995.
15. Schmidt, A-M., O. Hori, J. Chen, J.F. Li, J. Crandall, J. Zhang, R. Cao, S.D. Yan, J. Brett and D. Stern. Advanced glycation endproducts interacting with their endothelial receptor induce expression of vascular cell adhesion molecule-1 (VCAM-1): a potential mechanism for the accelerated vasculopathy of diabetes. J. Clin. Invest. 96:1395-1403, 1995.
16. Hori, O., J. Brett, T. Slattey, R. Cao, J. Zhang, J. Chen, M. Nagashima, D. Nitecki, J. Morser, D. Stern, A.M. Schmidt. The Receptor for Advanced Glycation Endproducts (RAGE) is a cellular binding site for amphotericin: mediation of neurite outgrowth and co-expression of RAGE and amphotericin in the developing nervous system. J. Biol. Chem. 270:25752-25761, 1995.
17. Abel, M., Ritthaler, U., Zhang, Y., Deng, Y., Schmidt, A.M., Greten, J., Sernau, T., Wahl, P., Andrassy, K., Ritz, E., Stern, D.M., and P. Nawroth. Expression of receptors for advanced glycosylated end products in renal disease. Nephrology, Dialysis, Transplantation 10:1662-1667, 1995.
18. Wautier, J-L., C. Zoukourian, O. Chappey, M-P. Wautier, P-J. Guillausseau, R. Cao, O. Hori, D. Stern, and A.M. Schmidt. Receptor-mediated endothelial cell dysfunction in diabetic vasculopathy: soluble receptor for advanced glycation endproducts blocks hyperpermeability. J. Clin. Invest. 97:238-243, 1996.
19. Schmidt, A.M., J. Crandall, R. Cao, O. Hori, and E. Lakatta. Elevated plasma levels of Vascular Cell Adhesion Molecule-1

(VCAM-1) in diabetic patients with microalbuminuria: a marker of vascular dysfunction and progressive vascular disease. *Brit. J. Hematol.* 92:747-750, 1996.

20. Schmidt, AM, E. Weidman, E. Lalla, SD Yan, O. Hori, R. Cao, J. Brett, and I. Lamster. Advanced Glycation Endproducts induce oxidant stress in the gingiva: a potential mechanism underlying accelerated periodontal disease associated with diabetes. *J. Periodontal Res.* 31:508-515, 1996.
21. Spanier, T., Oz, M., Levin, H., Weinberg, A., Moazami, N., Roberts, J.K., Mohr, J.P., Stern, D., Rose, E., and A.M. Schmidt. Activation of coagulation and fibrinolytic pathways in patients with Left Ventricular Assist Devices. *J. Thoracic and Cardiovascular Surgery*, 112:1090-1097, 1996.
22. Miyata, T., O. Hori, J.H. Zhang, S.D. Yan, L. Ferran, Y. Iida, and A.M. Schmidt. The Receptor for Advanced Glycation Endproducts (RAGE) mediates the interaction of AGE- $\beta_2$ -Microglobulin with human mononuclear phagocytes via an oxidant-sensitive pathway: implications for the pathogenesis of dialysis-related amyloidosis. *J. Clin. Invest.* 98:1088-1094, 1996.
23. Greten, J., Kreis, I., Wiesel, K., Stier, E., Schmidt, A.M., Stern, D.M., Ritz, E., Waldherr, R., and Nawroth, P.P. Receptors for Advanced Glycation Endproducts (AGEs) - expression by endothelial cells in non-diabetic uraemic patients. *Nephrology, Dialysis, Transplantation.* 11:786-790, 1996.
24. Yan, SD, X. Chen, J. Fu, M. Chen, H. Zhu, A. Roher, T. Slattey, M. Nagashima, J. Morser, A. Migheli, P. Nawroth, G. Godman, D. Stern, and A.M. Schmidt. RAGE and amyloid- $\beta$  peptide neurotoxicity in Alzheimer's disease. *Nature* 382:685-691, 1996.
25. Zoukourian, C., Wautier, M., Chappey, O., Dosquet, C., Rohban, T., Schmidt, A.M., Stern, D., and Wautier, J.L. Endothelial cell dysfunction secondary to the adhesion of diabetic erythrocytes. *International Andrology* 15:195-200, 1996.
26. Yan, S-D., Zhu, H., Fu, J., Yan, S-F., Roher, A., Tourtellotte, W., Rajavashisth, T., Chen, X., Stern, D. and Schmidt, A-M. Amyloid-beta peptide-RAGE interaction elicits neuronal expression of M-CSF: a proinflammatory pathway in Alzheimer's disease. *Proc. Natl. Acad. Sci.* 94:5296-5301, 1997.

27. Lander, H.L., Tauras, J.M., Ogiste, J.S., Moss, R.A., and A.M. Schmidt. Activation of the Receptor for Advanced Glycation Endproducts triggers a MAP Kinase pathway regulated by oxidant stress. *J. Biol. Chem.* 272:17810-17814, 1997.
28. Li, J., and Schmidt, A.M. Characterization and functional analysis of the promoter of RAGE, the Receptor for Advanced Glycation Endproducts. *J. Biol. Chem.* 272:16498-16506, 1997.
29. Renard, C., Chappey, O., Wautier, M.P., Nagashima, M., Lundh, E., Morser, J., Zhao, L., Schmidt, A.M., Scherrmann, J.M., and Wautier, J.L. Recombinant Advanced Glycation Endproduct Receptor pharmacokinetics in normal and diabetic rats. *Molecular Pharmacology* 52:54-62, 1997.
30. Spanier, T., Oz, M.C., Minanov, O.P., Simantov, R., Kisiel, W., Stern, D.M., Rose, E.A., and Schmidt, A.M. Heparinless cardiopulmonary bypass using active-site blocked Factor IXa: a preliminary study on the dog. In press, *J. Cardiovascular & Thoracic Surgery*, 1997.
31. Spanier, T., Oz, M., Minanov, O., Stern, D., Rose, E., and Schmidt, A.M. Active site- blocked Factor Ixa: a novel selective anticoagulant for use in cardiopulmonary bypass. *Surgical Forum XLVIII*:259-261, 1997.
32. Reckelhoff JF, Kanji V, Racusen LC, Schmidt AM, Yan SD, Morrow J, Roberts LJ II, Salahudeen AK. Vitamin E ameliorates enhanced renal lipid peroxidation and accumulation of F2-isoprostanes in aging kidneys. *Am. J. Physiol.* 274:R767-R774, 1998.
33. Owen, W.F., Jr., Hou, F.F., Stuart, R.O., Kay, J., Boyce, J., Chertow, G.M., and Schmidt, A.M.  $\alpha_2$ -Microglobulin modified with Advanced Glycation End Products modulates collagen synthesis by human fibroblasts. *Kidney International* 53:1365-1373, 1998.
34. Lalla, E., Lamster, I.B., Feit, M., Huang, L., and Schmidt, A.M. A murine model of accelerated periodontal disease in diabetes. *Journal of Periodontal Research* 33:387-399, 1998.
35. Hofmann, M.A., Kohl, B., Zumbach, M.S., Borcea, V., Bierhaus, A., Henkels, M., Amiral, J., Schmidt, A.M., Fiehn, W., Ziegler, R., Wahl, P., and Nawroth, P.P. Hyperhomocyst(e)inemia and endothelial dysfunction in IDDM. *Diabetes Care* 21:841-848, 1998.
36. Richardson, M., Schmidt, A.M., Graham, S.E., Achen, B., DeReske, M., and Russell, J.C. Vasculopathy and insulin

resistance in the JCR:LA-cp rat. *Atherosclerosis* 138:135-146, 1998.

37. Park, L., Raman, K.G., Lee, K.J., Yan, L., Ferran, L.J., Chow, W.S., Stern, D., and Schmidt, A.M. Suppression of accelerated diabetic atherosclerosis by soluble Receptor for AGE (sRAGE). *Nature Medicine* 4:1025-1031, 1998.
38. Li, J., Qu, W., and A.M. Schmidt. Sp1 binding elements in the promoter of RAGE are essential for amphoterin-mediated gene expression in cultured neuroblastoma cells. *J. Biol. Chemistry* 273:30870-30878, 1998.
39. Mackic, J.B., Stins, M., McComb, J.G., Calero, M., Ghiso, J., Kim, K.S., Yan, S.D., Stern, D., Schmidt, A.M., Frangione, B., and Zlokovic, B.V. Human blood-brain barrier receptors for Alzheimer's amyloid- $\beta$ 1-40: asymmetrical binding, endocytosis, and transcytosis at the apical side of brain microvascular endothelial cell monolayer. *J. Clin. Invest.* 102:734-743, 1998.
40. Spanier, T.B., Chen, J.M., Oz, M.C., Edwards, N.M., Kisiel, W., Stern, D.M., Rose, E.A., and Schmidt, A.M. Selective anticoagulation with active site-blocked Factor IXa suggests separate roles for intrinsic and extrinsic coagulation pathways in cardiopulmonary bypass. *J. Thoracic and Cardiovascular Surgery* 116:860-869, 1998.
41. Reckelhoff, J.F., Hennington, B.S., Kanji, V., Racusen, L.C., Schmidt, A.M., Yan, S.D., Morrow, J., Roberts, L.J., 2nd, and Salahudeen, A.K. Chronic aminoguanidine attenuates renal dysfunction and injury in aging rats. *American J. Hypertension* 12:492-508, 1999.
42. Sato, N., Hori, O., Yamaguchi, A., Lambert, J.C., Chartier-Harlin, M.C., Robinson, P.A., Delacourte, A., Schmidt, A.M., Furuyama, T., Imaizumi, K., Tohyama, M., and Takagi, T. A novel presenilin-2 splice variant in human Alzheimer's disease brain tissue. *J. Neurochemistry* 72:2498-2505, 1999.
43. Hofmann, M.A., Drury, S., Fu, C., Qu, W., Taguchi, A., Lu, Y., Avila, C., Kambham, N., Bierhaus, A., Nawroth, P., Neurath, M.F., Slattey, T., Beach, D., McClary, J., Nagashima, M., Morser, J., Stern, D., and Schmidt, A.M. RAGE mediates a novel proinflammatory axis: a central cell surface receptor for S100/calgranulin polypeptides. *Cell* 97:889-901, 1999.
44. Spanier, T.B., Chen, J.M., Oz, M.C., Stern, D.M., Rose, E.A., and Schmidt, A.M. Time- dependent cellular population of

textured-surface left ventricular assist devices contributes to the development of a biphasic systemic procoagulant response. *J. Thorac. Cardiovasc. Surg.* 118:404-413, 1999.

45. Choudri, T.F., Hoh, B.L., Prestigiacomo, C.J., Huang, J., Kim, L.J., Schmidt, A.M., Kisiel, W., Connolly, E.S. Jr., and Pinsky, D.J. Targeted inhibition of intrinsic coagulation limits cerebral injury in stroke without increasing intracerebral hemorrhage. *J. Exp. Med.* 190:91-99, 1999.
46. Kislinger, T., Fu, C., Huber, B., Qu, W., Taguchi, A., Yan, S.D., Hofmann, M., Yan, S.F., Pischetsrieder, M., Stern, D., and Schmidt, A.M. N<sup>ε</sup>-carboxymethyllysine modifications of proteins are ligands for RAGE that activate cell signaling pathways and modulate gene expression. *J. Biol. Chemistry* 274: 31740-31749, 1999.
47. Bonnardel-Phu, E., Wautier, J.L., Schmidt, A.M., Avila, C., and Vicaut, E. Acute modulation of albumin microvascular leakage by Advanced Glycation Endproducts in microcirculation of diabetic rats in vivo. *Diabetes* 48:2052-2058, 1999.
48. Barile, G.R., Chang, S.S., Park, L.S., Reppucci, V.S., Schiff, W.M., and Schmidt, A.M. Soluble cellular adhesion molecules in proliferative vitreoretinopathy and proliferative diabetic retinopathy. *Current Eye Research* 19: 219-227, 1999.
49. Lalla, E., Lamster, I.B., Feit, M., Huang, L., Spessot, A., Qu, W., Kislinger, T., Lu, Y., Stern, D.M., and Schmidt, A.M. Blockade of RAGE suppresses periodontitis-associated alveolar bone loss in diabetic mice. *J. Clin. Invest.* 105:1117-1124, 2000.
50. Tanji, N., Markowitz, G.S., Fu, C., Kislinger, T., Taguchi, A., Pischetsrieder, M., Stern, D., Schmidt, A.M., and D'Agati, V.D. The expression of Advanced Glycation Endproducts and their cellular receptor RAGE in diabetic nephropathy and non-diabetic renal disease. *J. American Soc. Nephrol.* 11:1656-1666, 2000.
51. Taguchi, A., Blood, D.C., del Toro, G., Canet, A., Lee, D.C., Qu, W., Tanji, N., Lu, Y., Lalla, E., Fu, C., Hofmann, M.A., Kislingler, T., Ingram, M., Lu, A., Tanaka, H., Hori, O., Ogawa, S., Stern, D.M., and Schmidt, A.M. Blockade of amphoterin/RAGE signaling suppresses tumor growth and metastases. *Nature* 405:354-360, 2000.
52. Yan, S.D., Zhu, H., Zhu, A., Golabek, A., Du, H., Roher, A., Yu, J., Soto, C., Schmidt, A.M., Stern, D., and Kindy, M.

Receptor-dependent cell stress and amyloid accumulation in systemic amyloidosis. *Nature Medicine* 6:643-651, 2000.

53. Giri, R., Shen, Y., Stins, M., Du Yan, S., Schmidt, A.M., Stern, D., Kim, K.S., Zlokovic, B., and Kalra, V.K. Beta-amyloid-induced migration of monocytes across human brain endothelial cells involves RAGE and PECAM-1. *Am. J. Physiol. Cell Physiol.* 279:C1772-1781, 2000.
54. Hofmann, M.A., Lalla, E., Lu, Y., Ryu Gleason, M., Wolf, B.M., Tanji, N., Ferran, L.J., Jr., Kohl, B., Rao, V., Kisiel, W., Stern, D.M., and Schmidt, A.M. Hyperhomocysteinemia enhances vascular inflammation and accelerates atherosclerosis in a murine model. *J. Clin. Invest.* 107:675-683, 2001.
55. Wautier, M.P., Chappey, O., Corda, S., Stern, D.M., Schmidt, A.M., and Wautier, J.L. Activation of NADPH Oxidase by Advanced Glycation Endproducts (AGEs) links oxidant stress to altered gene expression via RAGE. *American Journal of Physiology: Endocrinology & Metabolism* 280: E685-E694, 2001.
56. Kislinger, T., Tanji, N., Wendt, T., Qu, W., Lu, Y., Ferran, L.J., Jr., Taguchi, A., Olson, K., Bucciarelli, L., Goova, M., Hofmann, M.A., Cataldegirmen, G., D'Agati, V., Pischetsrieder, M., Stern, D.M., and Schmidt, A.M. RAGE mediates inflammation and enhanced expression of tissue factor in the vasculature of diabetic apolipoprotein E null mice. *Arteriosclerosis, Thrombosis and Vascular Biology* 21:905-910, 2001.
57. Hou, F.F., Miyata, T., Boyce, J., Yuan, O., Chertow, G.M., Kay, J., Schmidt, A.M., and Owen, W.F. Beta<sub>2</sub>-microglobulin modified with advanced glycation endproducts delays monocyte apoptosis. *Kidney International* 59:990-1002, 2001.
58. Goova, M.T., Li, J., Kislinger, T., Qu, W., Lu, Y., Bucciarelli, L.G., Nowygrod, S., Wolf, B.M., Caliste, X., Yan, S.F., Stern, D.M., and Schmidt, A.M. Blockade of Receptor for AGE (RAGE) restores effective wound healing in diabetic mice. *American Journal of Pathology* 159:513-525, 2001.
59. Lue, L.F., Walker, D., Brachova, L., Beach, T.G., Rogers, L., Schmidt, A.M., Stern, D.M., and Yan, S.D. Involvement of RAGE-microglia interactions in Alzheimer's disease: in vivo and in vitro studies. *Experimental Neurology* 171:29-45, 2001.
60. Bierhaus, A., Schiekofer, S., M. Schwaninger, Andrassy, M., Humpert, P.M., Chen, J., Hong, M., Luther, T., Henle, T., Kloting, I., Morcos, M., Hofmann, M., Tritschler, H., Weigle, B., Kasper, M., Smith, M., Perry, G., Schmidt, A.M., Stern,



- D.M., Haring, H.U., Schleicher, E., and Nawroth, P.P. Diabetes-associated sustained activation of the transcription factor Nuclear Factor-kappa B. *Diabetes* 50:2792-2808, 2001.
61. Basta, G., Lazzerini, G., Massaro, M., Simoncini, T., Tanganelli, P., Fu, C., Kislinger, T., Stern, D.M., Schmidt, A.M., and De Caterina, R. Advanced Glycation Endproducts (AGEs) activate endothelium via RAGE; a mechanism for amplification of inflammatory responses. *Circulation* 105:816-822, 2002.
  62. Huang, E.H., Carter, J.J., Whelan, R.L., Liu, Y.H., Rosenberg, J.O., Rotterdam, H., Schmidt, A.M., Stern, D.M., and Forde, K.A. Colonoscopy in mice. *Surgical Endoscopy* 16:22-24, 2002.
  63. Hofmann, M.A., Drury, S., Hudson, B.I., Gleason, M.R., Qu, W., Lu, Y., Lalla, E., Chitnis, S., Monteiro, J., Stickland, M.H., Bucciarelli, L.G., Moser, B., Moxley, G., Itescu, S., Grant, P.J., Gregersen, P.K., Stern, D.M., and Schmidt, A.M. RAGE and arthritis: The G82S polymorphism amplifies the inflammatory response. *Genes and Immunity* 3:123-135, 2002.
  64. Collison, K.S., Parhar, R.S., Saleh, S.S., Meyer, B.F., Kwaasi, A.A., Hammami, M.M., Schmidt, A.M., Stern, D.M., and Al-Mohanna, F.A. RAGE-mediated neutrophil dysfunction is evoked by advanced glycation endproducts. *Journal of Leukocyte Biology* 71:433-444, 2002.
  65. Hou, F.F., Jiang, J.P., Guo, J.Q., Wang, G.B., Zhang, X., Stern, D.M., Schmidt, A.M., and Owen, W.F., Jr. Receptor for Advanced Glycation Endproducts on human synovial fibroblasts: role in the pathogenesis of dialysis-related amyloidosis. *Journal of the American Society of Nephrology* 13:1296-1306, 2002.
  66. Bucciarelli, L.G., Wendt, T., Qu, W., Lu, Y., Lalla, E., Rong, L.L., Goova, M.T., Moser, B., Kislinger, T.K., Lee, D.C., Kashyap, Y., Stern, D.M., and Schmidt, A.M. RAGE blockade stabilizes established atherosclerosis in diabetic apolipoprotein E null mice. *Circulation* 106:2827-2835, 2002.
  67. Morcos, M., Sayed, A.A., Bierhaus, A., Yard, B., Waldherr, R., Merz, W., Kloeting, I., Schleicher, E., Mentz, S., Abd El Baki, R.F., Tritschler, H., Kasper, M., Schwenger, V., Hamann, A., Dugi, K.A., Schmidt, A.M., Stern, D., Ziegler, R., haering, H.U., Andrassy, M., Van Der Woude, F., and Nawroth, P.P. Activation of Tubular epithelial cells in diabetic nephropathy. *Diabetes* 51:3532-3544, 2002.

68. Wendt, T.M., Tanji, N., Guo, J., Kislinger, T.R., Qu, W., Lu, Y., Bucciarelli, L.G., Rong, L.L., Moser, B., Markowitz, G.S., Stein, G., Bierhaus, A., Liliensiek, B., Arnold, B., Nawroth, P.P., Stern, D.M., D'Agati, V.D., and Schmidt, A.M. RAGE drives the development of glomerulosclerosis and implicates podocyte activation in the pathogenesis of diabetic nephropathy. *American Journal of Pathology* 162:1123-1137, 2003.
69. Sakaguchi T., Yan, S.F., Yan, S.D., Rong, L.L., Sousa, M., Belov, D., Andrassy, M., Marso, S.P., Duda, S., Arnold, B., Liliensiek, B., Nawroth, P.P., Stern, D.M., Schmidt, A.M., and Naka, Y. Arterial restenosis: central role of RAGE-dependent neointimal expansion. *Journal of Clinical Investigation* 111:959-972, 2003.
70. Yan, S.S.D., Wu, Z-Y., Zhang, H.P., Furtado G., Chen, X., Yan, S.F., Schmidt, A.M., Brown, C., Stern, A., LaFaille, J., Chess, L., Stern, D.M., and Jiang, H. Suppression of experimental autoimmune encephalomyelitis by selective blockade of encephalitogenic T-cell infiltration of the central nervous system. *Nature Medicine* 9:287-293, 2003.
71. Zhou, Z., Wang, K., Penn, M.S., Marso, S.P., Lauer, M.A., Forudi, F., Zhou, X., Qu, W., Lu, Y., Stern, D.M., Schmidt, A.M., Lincoff, A.M., and Topol, E.J. Receptor for AGE (RAGE) mediates neointimal formation in response to arterial injury. *Circulation*: 107:2238-2243, 2003.
72. Lalla, E., Lamster, I.B., Hofmann, M.A., Bucciarelli, L.G., Jerud, A.P., Tucker, S., Lu, Y., Papapanou, P.N., and Schmidt, A.M. Oral infection with a periodontal pathogen accelerates atherosclerosis in apolipoprotein E null mice. *Arteriosclerosis, Thrombosis and Vascular Biology* 23:1405-1411, 2003.
73. Deane, R., Du Yan, S., Subramanian, R.K., LaRue, B., Jovanovic, S., Hogg, E., Welch, D., Manness, L., Lin, C., Yu, J., Zhu, H., Ghiso, J., Frangione, B., Stern, A., Schmidt, A.M., Armstrong, D.L., Arnold, B., Liliensiek, B., Nawroth, P., Hofman, F., Kindy, M., Stern, D., and Zlokovic, B. RAGE mediates amyloid-beta peptide transport across the blood-brain barrier and accumulation in brain. *Nature Medicine* 9:907-913, 2003.
74. Cipollone, F., Iezzi, A., Fazia, M., Zucchelli, M., Pini, B., Cuccurullo, C., De Cesare, De Blasis, G., Murano, R., Bei, R., Chiarelli, F., Schmidt, A.M., Cuccurullo, F., and Mezzetti, A. The Receptor RAGE as a progression factor amplifying arachidonate-dependent inflammatory and proteolytic response

in human atherosclerotic plaques: role of glycemic control. *Circulation* 108:1070-1077, 2003.

75. Shaw, S.S., Schmidt, A.M., Banes, A.K., Wang, X., Stern, D.M., and Marrero, M.B. S100B-RAGE-mediated augmentation of angiotensin II-induced activation of JAK2 in vascular smooth muscle cells is dependent on PLD2. *Diabetes* 52:2381-2388, 2003.
76. Arumugam, T., Simeone, D.M., Schmidt, A.M., and Logsdon, C.D. S100P stimulates cell proliferation and survival via RAGE. *Journal of Biological Chemistry* 279:5059-5065, 2004.
77. Harja, E., Bucciarelli, L.G., Lu, Y., Stern, D.M., Zou, Y.S., Schmidt, A.M., and Yan, S.F. Early growth response-1 promotes atherogenesis: mice deficient in early growth response-1 and apolipoprotein E display decreased atherosclerosis and vascular inflammation. *Circulation Research* 94:333-339, 2004.
78. Cellek, S., Qu, W., Schmidt, A.M., and Moncada, S. Synergistic action of advanced glycation endproducts and endogenous nitric oxide leads to neuronal apoptosis in vitro: a new insight into selective nitroergic neuropathy in diabetes. *Diabetologia* 47:331-339, 2004.
79. Zeng, S., Feirt, N., Goldstein, M., Guarrera, J., Ippagunta, N., Ekong, U., Dun, H., Lu, Y., Qu, W., Schmidt, A.M., and Emond, J.C. Blockade of receptor for advanced glycation end products (RAGE) attenuates ischemia and reperfusion injury to the liver in mice. *Hepatology* 39:422-432, 2004.
80. Li, J.H., Wang, W., Huang, X.R., Oldfield, M., Schmidt, A.M., Cooper, M.E., and Lan, H.Y. Advanced Glycation Endproducts induce tubular epithelial-myofibroblast transition through the RAGE-ERK1/2 MAP kinase signaling pathway. *American Journal of Pathology* 164:1389-1397, 2004.
81. Hwang, Y.C., Kaneko, M., Bakr, S., Liao, H., Lu, Y., Lewis, E.R., Yan, S.D., Ii, S., Itakura, M., Rui, L., Skopicki, H., Homma, S., Schmidt, A.M., Oates, P.J., Szabolcs, M., and Ramasamy, R. Central role for aldose reductase pathway in myocardial ischemic injury. *FASEB Journal* 18:1192-1199, 2004.
82. Wear-Maggitti, K., Lee, J., Conejero, A., Schmidt, A.M., Grant, R., and Breitbart, A. Use of topical sRAGE in diabetic wounds increases neovascularization and granulation tissue formation. *Annals Plastic Surgery* 52:519-521, 2004.

83. Fujita, T., Asai, T., Andrassy, M., Stern, D.M., Pinsky, D.J., Zou, Y.S., Okada, M., Naka, Y., Schmidt, A.M., and Yan, S.F. PKC beta regulates ischemia/reperfusion injury in the lung. *Journal of Clinical Investigation* 113:1615-1623, 2004.
84. Liliensiek, B., Weigand, M.A., Bierhaus, A., Nicklas, W., Kasper, M., Hofer, S., Plachky, J., Grone, H.J., Kurschus, F.C., Schmidt, A.M., Yan, S.D., Martin, E., Schleicher, E., Stern, D.M., Hammerling, G.G., Nawroth, P.P., and Arnold, B. Receptor for advanced glycation endproducts (RAGE) regulates sepsis but not the adaptive immune response. *Journal of Clinical Investigation* 113:1641-1650, 2004.
85. Hou, F.F., Ren, H., Owen, W.F., Jr., Guo, Z.J., Chen, P.Y., Schmidt, A.M., Miyata, T., and Zhang, X. Enhanced expression of receptor for advanced glycation endproducts in chronic kidney disease. *Journal American Society Nephrology* 15:1889-1896, 2004.
86. Chen, Y., Yan, S.S., Colgan, J., Zhang, H.P., Luban, J., Schmidt, A.M., Stern, D., and Herold, K.C. Blockade of late stages of autoimmune diabetes by inhibition of the receptor for advanced glycation end products. *Journal of Immunology* 173:1399-1405, 2004.
87. Rong, L.L., Trojaborg, W., Qu, W., Kostov, K., Yan, S.D., Gooch, C., Szabolcs, M., Hays, A.P., and Schmidt, A.M. Antagonism of RAGE suppresses peripheral nerve regeneration. *FASEB Journal* 18:1812-1817, 2004.
88. Rong, L.L., Yan, S.F., Wendt, T., Hans-Wagner, D., Pachydaki, S., Bucciarelli, L.G., Adebayo, A., Qu, W., Lu, Y., Kostov, K., Lalla, E., Yan, S.D., Gooch, C., Szabolcs, M., Trojaborg, W., Hays, A.P., and Schmidt, A.M. RAGE modulates peripheral nerve regeneration via recruitment of both inflammatory and axonal outgrowth pathways. *FASEB Journal* 18:1818-1825, 2004.
89. Arancio, O., Zhang, H.P., Chen, X., Lin, C., Trinchese, F., Puzzo, D., Liu, S., Hegde, A., Yan, S.F., Stern, A., Luddy, J.S., Lue, L.-F., Walker, D.G., Roher, A., Buttini, M., Mucke, L., Li, W., Schmidt, A.M., Kindy, M., Hyslop, P.A., Stern, D.M., and Yan, S.S.D. RAGE potentiates A beta-induced perturbation of neuronal function in transgenic mice. *EMBO Journal* 23:4096-4105, 2004.
90. Giacona, M.B., Papapanou, P.N., Lamster, I.B., Rong, L.L., D'Agati, V.D., Schmidt, A.M., and Lalla, E. *Porphyromonas gingivalis* induces its uptake by human macrophages and promotes foam cell formation in vitro. *FEMS Microbiology Letters* 241:95-101, 2004.

91. Bierhaus, A., Haslbeck, K.-M., Humpert, P.M., Liliensiek, B., Dehmer, T., Morcos, M., Sayed, A.A.R., Andrassy, M., Schiekofer, S., Schneider, J.G., Schulz, J.B., Heuss, D., Neundorfer, B., Dierl, S., Huber, J., Tritschler, H., Schmidt, A.M., Schwaninger, M., Haering, H.-U., Schleicher, E., Kasper, M., Stern, D.M., Arnold, B., and Nawroth, P.P. Loss of pain perception in diabetes is dependent on a receptor of the immunoglobulin superfamily. *Journal of Clinical Investigation* 114:1741-1751, 2004.
92. Sakaguchi, T., Asai, T., Belov, D., Okada, M., Pinsky, D.J., Schmidt, A.M., and Naka, Y. Influence of ischemic injury on vein graft remodeling: role of cyclic adenosine monophosphate second messenger pathway in enhanced vein graft preservation. *J. Thoracic Cardiovascular Surgery* 129:129-137, 2005.
93. Feng, L., Matsumoto, C., Schwartz, A., Schmidt, A.M., Stern, D.M., and Pile-Spellman, J. Chronic vascular inflammation in patients with type 2 diabetes: endothelial biopsy and RT-PCR analysis. *Diabetes Care* 28:379-384, 2005.
94. Cataldegirmen, G., Zeng, S., Feirt, N., Ippagunta, N., Dun, H., Qu, W., Lu, Y., Rong, L.L., Hofmann, M.A., Kislinger, T., Pachydaki, S.I., Jenkins, D.G., Weinberg, A., Lefkowitz, J., Rogiers, X., Yan, S.F., Schmidt, A.M., and Emond, J. RAGE limits regeneration after massive liver injury by coordinated suppression of TNF-alpha and NF-kappaB. *J. Experimental Medicine* 201:473-484, 2005

## **II. Invited Articles/Chapters**

1. Schmidt, A-M., Esposito, C., Brett, J., Ogawa, S., Clauss, M., Kirstein, M., Radoff, S., Vlassara, H., and Stern, D. Modulation of endothelial function and endothelial-monocyte interaction by advanced glycosylated end products of proteins. In *Mononuclear Phagocytes*, Ed. R. van Furth, Kluwer Academic Publishers (Dordrecht) pp. 202-207 1992.
2. Schmidt, A-M., and Stern, D. Cellular receptors for advanced glycation endproducts. *Proceedings of the 5th International Symposium on the Maillard Reaction*. In press, 1995.
3. Schmidt, A-M., Hori, O., Brett, J., Yan, S-D., Wautier, S-D., and Stern, D. Cellular receptors for advanced glycation endproducts: implications for induction of oxidant stress and cellular dysfunction in the pathogenesis of vascular lesions. *Arterioscl. and Thromb.* 14:1521-1528, 1994.

4. Hori, O., Yan, S-D., Ogawa, S., Matsumoto, M., Stern, D., and Schmidt, A-M. Role of cellular receptors for advanced glycation endproducts: from atherosclerosis to Alzheimer's Disease. In, Proceedings of the International Symposium of Aging and Health (Nagoya, Japan, 1994, p. 152-154).
5. Schmidt, A.M., SD Yan, and D. Stern. The Dark Side of Glucose (News and Views). *Nature Medicine* 1:1002-1004, 1995.
6. Schmidt, A.M., O. Hori, SD Yan, and D. Stern. Advanced glycation endproducts interacting with their cellular receptor induce oxidant stress: implications for the pathogenesis of vascular disease in aging and diabetes. In Coronary Restenosis: From Genetics to Therapeutics. Ed. G. Feuerstein. Marcel Dekker, New York, p. 85-98, 1996.
7. Schmidt AM, O. Hori, R. Cao, SD Yan, J. Brett, J.L. Wautier, S. Ogawa, K. Kuwabara, M. Matsumoto, and D. Stern. RAGE: a novel cellular receptor for Advanced Glycation Endproducts. In, Proceedings of the 15th International Diabetes Foundation Satellite Symposium on "Diabetes and Macrovascular Complications. *Diabetes* 45(Supplement 3): S77- S80, 1996.
8. Hori, O., SD Yan, and A.M. Schmidt. The Receptor for Advanced Glycation Endproducts: implications for the development of diabetic vascular disease. In Endothelium in Clinical Practice. Ed. G. Rubanyi. In press, 1996.
9. Schmidt, A-M., Pinsky, D., Kao, J., Yan, S-D., Ogawa, S., Wautier, J-L., and Stern, D. Environmental perturbations of endothelium: modulation of vascular properties by hypoxia, by hyperglycemia and by tumor-derived cytokines. In Vascular Control of Hemostasis (ed. V. van Hinsbergh); part of series Advances in Vascular Biology (eds. M. Vadas and H. Harlan). Gordon and Breach Science Publishers PTY LTD, Victoria, Australia, p. 257-279, 1996.
10. Yan SD, Stern D and AM Schmidt. What's the RAGE? *European J. Clinical Investigation* 27:179-181, 1997.
11. Salahudeen AK, Kanji V, Reckelhoff JF and AM Schmidt. Pathogenesis of diabetic nephropathy: a radical approach. *Nephrology, Dialysis and Transplantation* 12:664-668, 1997.
12. Schmidt, AM, Wautier JL, Stern D, and Yan SD. RAGE: A Receptor with a taste for multiple ligands and varied pathophysiologic states. In Hormones and Signaling, Volume I, Academic Press, p. 41-63, 1997.

13. Lalla, E., Lamster, IB, and AM Schmidt. Enhanced interaction of Advanced Glycation Endproducts with their cellular receptor RAGE: implications for the pathogenesis of accelerated periodontal disease in diabetes. In press, Journal of Periodontology, 1998.
14. Cines, D.B., Pollak, E.S., Buck, C.A., Loscalzo, J., Zimmerman, G.A., McEver, R.P., Pober, J.S., Wick, T.M., Konkle, B.A., Schwartz, B.S., Barnathan, E.S., McCrae, K.R., Hug, B.A., Schmidt, A.M. and Stern, D.M. Endothelial cells in physiology and in the pathophysiology of vascular disorders. Blood 91:3527-3561, 1998.
15. Schmidt, A.M., Pinsky, D., Lawson, C., Tijburg, P., and Stern, D. Interaction of coagulation proteins with the vessel wall. Thrombosis and Hemorrhage. Editors: Loscalzo, J., and Schafer, J., Williams and Wilkins, Chapter 17, pp. 365-371, 1998.
16. Schmidt, A.M. The receptor for advanced glycation endproducts, present on certain target cells in diabetes, is implicated in the pathogenesis of diabetic complications. Internal Medicine: Clinical and Laboratory 6:73-79, 1998.
17. Spanier, T.B., and Schmidt, A.M. Endothelial cell injury. In Minimally Invasive Cardiac Surgery, Humana Press, p. 31-42, 1999.
18. Schmidt, A.M., Yan, S.D., Wautier, J.L., and Stern, D. Activation of receptor for advanced glycation end products: a mechanisms for chronic vascular dysfunction in diabetic vasculopathy and atherosclerosis. Circulation Research 84:489-497, 1999.
19. Yan, S.D., Roher, A., Chaney, M., Zlokovic, B., Stern, D., and Schmidt, A.M. Cellular cofactors potentiating induction of stress and cytotoxicity by amyloid-beta peptide. In press, Biochim. Biophys. Acta, 1999.
20. Schmidt, A.M., Rose, E., and Stern, D. Cardiopulmonary bypass: to clot or not to clot, that is the problem. J. Thoracic and Cardiovasc. Surgery 118:429-431, 1999.
21. Yan, S.D., Roher, A., Schmidt, A.M., and Stern, D. Cellular cofactors for amyloid-beta peptide induced cell stress: moving from cell culture to in vivo. In press, American J. Pathology, 1999.
22. Schmidt, A.M., and Stern, D.M. Emerging therapeutic targets in diabetic vascular disease. Emerging Therapeutic Targets 3:483-493, 1999.

23. Yan, S.D., Roher, A., Schmidt, A.M., and Stern, D.M. Cellular cofactors for amyloid-beta peptide-induced cell stress: moving from cell culture to in vivo. *Am. J. Pathology* 155: 1403-1411, 1999.
24. Schmidt, A.M., Hofmann, M., Taguchi, A., Yan, SD, and Stern, D. RAGE: a multiligand receptor contributing to the cellular response in diabetic vasculopathy and inflammation. *Seminars in Thrombosis & Hemostasis* 26: 485-494, 2000.
25. Lalla, E., Lamster, I.B., Drury, S., Fu, C., and Schmidt, A.M. Hyperglycemia, glycooxidation, and receptor for advanced glycation endproducts: potential mechanisms underlying diabetic complications, including diabetes-associated periodontitis. *Periodontology* 2000: 23:50-62, 2000.
26. Schmidt, A.M., and Stern, D. Atherosclerosis and diabetes: the RAGE connection. *Current Atherosclerosis Reports* 2:430-436, 2000.
27. Schmidt, A.M., and Stern, D.M. RAGE: a new target for the prevention and treatment of the vascular and inflammatory complications of diabetes. *Trends in Endocrinology and Metabolism* 11: 368-374, 2000.
28. Schmidt, A.M., and Stern, D.M. A radical approach to the pathogenesis of diabetic complications. *Trends in Pharmacological Sciences* 21:367-369, 2000.
29. Schmidt, A.M., Yan, S.D., Yan, S.F., and Stern, D.M. The biology of the receptor for advanced glycation end products and its ligands. *Biochimica et Biophysica Acta* 14671: 1-13, 2000.
30. Schmidt, A.M., and Stern, D.M. Hyperinsulinemia and vascular dysfunction: the role of NF-kB, yet again. *Circulation Research* 87: 722-724, 2000.
31. Schmidt, A.M., and Stern, D.M. Chemokines on the rise: MCP-1 and restenosis. *Arteriosclerosis, Thrombosis and Vascular Biology* 21:297-299, 2001.
32. Yan, S.D., Roher, A., Soto, C., Al-Mohanna, F., Collison, K., Schmidt, A.M., and Stern, D. Cellular targets for amyloid-beta peptide: potential roles in neuronal cell stress and toxicity. *Neurobiology of Alzheimer's diseases*, second edition, editors: Dawbarn, D., and Allen, S. In the *Molecular and Cellular Neurobiology Series*; Series Advisors, Davies, R.,



Collingridge, G., and Hunt, S. pp. 252-269. Oxford University Press, 2001.

33. Wyss-Coray, T., McConlogue, L., Kindy, M., Schmidt, A.M., Yan, S.D., and Stern, D. Key signaling pathways regulate amyloid-beta peptide biological activities and accumulation. *Neurobiology of Aging* 22:967-973, 2001.
34. Yan, S.D., Schmidt, A.M., and Stern, D. Alzheimer's disease: inside, outside, upside down. *Biochemical Society Symposium* 67:15-22, 2001. Symposium volume title: Neuronal Signal Transduction and Alzheimer's Disease. Edited by C.O'Neill and B. Anderton. Published by the Biochemical Society, London.
35. Yan, S.D., Schmidt, A.M., and Stern, D.M. Alzheimer's disease: inside, outside, upside down. *Biochem Soc Symp* 67:15-22, 2001.
36. Schmidt, A.M., and Stern, D.M. Receptor for AGE (RAGE) is a gene within the major histocompatibility class III region: implications for host response mechanisms in homeostasis and chronic disease. *Frontiers in Bioscience* 6D1151-D1160, 2001.
37. Schmidt, A.M., Yan, S.D., Yan, S.F., and Stern, D.M. The multiligand receptor RAGE as a progression factor amplifying immune and inflammatory responses. *J. Clin. Invest.* 108:949-955, 2001.
38. Lalla, E., Lamster, I.B., Stern, D.M., and Schmidt, A.M. Receptor for Advanced Glycation Endproducts, inflammation, and accelerated periodontal disease in diabetes: mechanisms and insights into therapeutic modalities. *Annals of Periodontology* 6: 113-118, 2001.
39. Wendt, T., Bucciarelli, L., Qu, W., Lu, Y., Yan, S.F., Stern, D.M., and Schmidt, A.M. Receptor for Advanced Glycation Endproducts (RAGE) and vascular inflammation: insights into the pathogenesis of macrovascular complications in diabetes. *Current Atherosclerosis Reports* 4f:228-237, 2002.
40. Stern, D.M., Yan, S.D., Yan, S.F., and Schmidt, A.M. Receptor for advanced glycation endproducts (RAGE) and the complications of diabetes. *Ageing Research Reviews* 1: 1-15, 2002.
41. Bucciarelli, L.G., Wendt, T., Rong, L., Lalla, E., Hofmann, M.A., Goova, M.T., Taguchi, A., Yan, S.F., Yan, S.D., Stern, D.M., and Schmidt, A.M. RAGE is a multiligand receptor of the immunoglobulin superfamily: implications for homeostasis and disease. *Cell Molecular Life Sciences* 59:1117-1128, 2002.

42. Stern, D., Yan, S.D., Yan, S.F., and Schmidt, A.M. Receptor for advanced glycation endproducts: a multiligand receptor magnifying cell stress in diverse pathologic settings. *Adv Drug Delivery Reviews* 54:1615-1625, 2002.
43. Hudson, B.I., Hofmann, M.A., Bucciarelli, L., Wendt, T., Moser, B., Lu, Y., Qu, W., Stern, D.M., D'Agati, V.D., Yan, S.D., Yan, S.F., Grant, P.J., and Schmidt, A.M. Glycation and diabetes: the RAGE connection. *Current Science* 83:1515-1521, 2002.
44. Wendt, T., Tanji, N., Guo, J., Hudson, B.I., Bierhaus, A., Ramasamy, R., Arnold, B., Nawroth, P.P., Yan, S.F., D'Agati, V., and Schmidt, A.M. Glucose, glycation and RAGE: implications for amplification of cellular dysfunction in diabetic nephropathy. Invited Review, *Frontiers in Nephrology, Journal of American Society of Nephrology* 14:1383-1395, 2003.
45. Lamster, I.B., Schmidt, A.M., and Lalla, E. Periodontal Disease as a Complication of Diabetes Mellitus: Studies of Type 1 Disease. In: *Periodontal Tissue Destruction and Remodelling*. Edited by: Tuncer, O., Mutlu, S., and Scully, C., Published by Quintessence, Ltd., Chicago, Illinois, 2003.
46. Hudson, B.I., Bucciarelli, L.G., Wendt, T., Sakaguchi, T., Lalla, E., Qu, W., Lu, Y., Lee, L., Stern, D.M., Naka, Y., Ramasamy, R., Yan, S.D., Yan, S.F., D'Agati, V., and Schmidt, A.M. Blockade of receptor for advanced glycation endproducts: a new target for therapeutic intervention in diabetic complications and inflammatory disorders. *Archives of Biochemistry and Biophysics* 419:80-88, 2003.
47. Schmidt, A.M., Hudson, B.I., Yan, S.F., and Stern, D.M. Receptor-dependent vascular stress in diabetes. Invited chapter in: *Diabetes and Cardiovascular Disease: Integrating Science and Clinical Medicine*. Edited by Marso, S.P., and Stern, D.M. Lippincott, Williams and Wilkins, pp. 93-111, 2003.
48. Yan, S.F., Ramasamy, R., Naka, Y., and Schmidt, A.M. Glycation, Inflammation and RAGE: A scaffold for the macrovascular complications of diabetes and beyond. *Circulation Research* 93:1159-1169, 2003.
49. Naka, Y., Bucciarelli, L.G., Wendt, T., Lee, L.K., Rong, L.L., Ramasamy, R., Yan, S.F., and Schmidt, A.M. RAGE Axis. *Animal Models and Novel Insights into the Vascular Complications of*

Diabetes, Arteriosclerosis, Thrombosis and Vascular Biology  
24:1342-1349, 2004.

50. Yan, S.F., Ramasamy, R., Bucciarelli, L.G., Wendt, T., Lee, L.K., Hudson, B.I., Stern, D.M., Lalla, E., Yan, S.D., Rong, L.L., Naka, Y., and Schmidt, A.M. RAGE and its ligands: a lasting memory in diabetic complications? Diabetes Vascular Disease Research 1:10-20, 2004.
51. Hudson, B.I., and Schmidt, A.M. RAGE: a novel target for drug intervention in diabetic vascular disease. Pharmaceutical Research 21:1079-1086, 2004.
52. Wautier, J.L., and Schmidt, A.M. Protein glycation: a firm link to endothelial cell dysfunction. Circulation Research 95:233-238, 2004.
53. Basta, G., Schmidt, A.M., and DeCaterina, R. Advanced glycation endproducts and vascular inflammation: implications for accelerated atherosclerosis in diabetes. Cardiovascular Research 63:582-592, 2004.

### **III. Abstracts**

1. Schmidt, A.M., Clauss, M., Yan, S.D., Esposito, C., Brett, J., Kirsten, M., Radoff, S., Vlassara, H., and Stern, D. Modulation of endothelial cell hemostatic properties by advanced glycosylation endproducts of proteins. Thromb. Haemost. 65:869 (#609), 1991.
2. Neeper, M., Schmidt, A.M., Wang, F., Pan, Y.C., Stern, D., and Shaw, A. Cloning and expression of the 40 kilodalton cell surface receptor for advanced glycosylation end products (RAGE40): its role in mediating AGE-cellular interactions. Circ (Suppl.) 84:0457, 1991.
3. Schmidt, A.M., Brett, J., Yan, S.D., Silverstein, S.C., and Stern, D. Regulation of human monocyte migration by cell surface receptors for advanced glycosylation end products. Circ (Suppl.) 84:0456, 1991.
4. Wautier, J.L., Wautier, M.P., Schmidt, A.M., Yan, S.D., Mora, R., Brett, J., and Stern, D. The 40 kilodalton endothelial cell surface receptor for advanced glycosylation endproducts is an adhesion molecule for diabetic erythrocytes. Blood 78 (Suppl. 1): 341, 1991.
5. Tsang, T., Burns, D., Wang, F., Pan, Y.C., Schmidt, A.M., and Stern, D. Cloning of an 80 kDa advanced glycosylation endproduct binding protein isolated from bovine lung.

FASEB J. (#1): 1341, 1991.

6. Mora, R., Schmidt, A.M., Brett, J., Yan, S.D., and Stern, D., An unique 35 kDa membrane protein and a soluble lactoferrin-like protein form a complex which constitutes the endothelial cell receptor for advanced glycosylation endproducts. FASEB J. 6 (#5):A1593(#3801), 1992
7. Schmidt, A.M., Yan, S.D., Brett, J., Mora, R., Neeper, M., Shaw, A., and Stern, D. A cellular receptor for advanced glycosylation endproducts of proteins: potential role in endothelial and monocyte dysfunction. Zimmerman Conference, Progress in Vascular Biology, Hemostasis and Thrombosis, p. 27., 1992.
8. Yan, S.D., Schmidt, A.M., Brett, J., Hurley, W., Tsang, T., and Stern, D. Interaction of advanced glycosylation endproducts of proteins with lactoferrin on the cell surface or in solution enhances generation of oxygen free radicals: a mechanism for peroxidation of lipids on the cell surface and in the matrix. Clinical Res., 40:193A, 1992.
9. Schmidt, A.M., Mora, R., Brett, J., Ryan, J., Kuwabara, K., and Stern, D. Soluble receptor for advanced glycosylation endproducts inhibits the interaction of AGE albumin with receptors. Clinical Res. 40:292A, 1992.
10. Brett, J., Schmidt, A.M., Yan, S.D., Neeper, M., Shaw, A., Nowygrod, R., and Stern, D. Expression of receptor for advanced glycosylation endproducts on mononuclear phagocytes and endothelial cells in vivo: increased expression in the microvasculature. Circ. 86: (Supple 1): 1889, 1992.
11. Schmidt, A.M., Brett, J., Macaulay, A., Rosolowsky, M., Shaw, A., and Stern, D. The receptor for advanced glycosylation endproducts has a central role in clearance, tissue deposition, and gene activation in response to infused advanced glycosylation endproducts. Circ. 86 (Suppl. 1):1890, 1992.
12. Libuttie, S., Schmidt, A.M., Williams, M., Bass, L., Oz, M., Wider, T., Stern, D., and Nowygrod, R. A model of diabetic wound healing: glycated proteins decrease the reparative response to wounding in normal animals. Am. College of Surgeons, 1992.
13. Wautier, J.L., Wautier, M.P., Schmidt, A.M., Capron, L., Zoukouvian, C., Yan, S.D., Mora, R., Brett, J., and Stern, D. The role of advanced glycation endproducts in the interaction of diabetic red cells with the vessel wall. Proceedings of

VII International Symposium on the Biology of Vascular Cells, p45, 1992.

14. Schmidt, A.M., Anderson, M., Koga, S., Brett, J., Bierhaus, A., Nawroth, P., Nowygrod, R., and Stern, D. Receptor-mediated activation of mononuclear phagocytes by advanced glycation endproducts of proteins involves activation of NF-kB. Blood 90 (Suppl. 1):403, 1992.
15. Schmidt, A.M., Yan, S.D., Mora, R., Brett, J., and Stern, D. Cellular receptors for advanced glycation endproducts: implications for endothelial and monocyte dysfunction. Proceedings of the VII international Symposium on the Biology of Vascular Cells, p. 47, 1992.
16. Schmidt, A.M., Yan, S.D., Zou, S.D., Brett, J., and Stern, D. Advanced glycation endproducts: a mechanism for age-dependent perturbation of monocyte and endothelial cell function. Keystone Symposium on Molecular Biology of Aging, 1992.
17. Yan, S.D., Schmidt, A.M., Anderson, M., Brett, J., and Stern, D. Advanced glycation endproducts exert an oxidant stress on cells/tissues via interaction with their cellular receptors. FASEB J. 7:2843, 1992.
18. Schmidt, A.M., Yan, S.D., Brett, J., Lyn, S., and Stern, D. Advanced glycation endproducts: a mechanism for age-dependent perturbation of endothelial cell function. European J. of Cell Biol. 60 (Suppl. 37):206, 1993.
19. Yan, S.D., Schmidt, A.M., Brett, J., Greene, L., Migheli, A., Anderson, M., and Stern, D. The receptor for advanced glycation endproducts is present in neural tissue and PC12 cells, providing a mechanism for AGE-induced oxidant stress in neural tissue. Clin. Res. 41:190A, 1993.
20. Schmidt, A.M., Brett, J., Yan, S.D., and Stern, D. The receptor for advanced glycation endproducts is present in vascular smooth muscle cells and mediates cellular proliferation. Clin. Res. 41:389A, 1993.
21. Yan, S.D., Schmidt, A.M., Chen, X., Zou, Y.S., Brett, J., Greene, L., and Stern, D. Increased levels of advanced glycation endproducts and their receptor in Alzheimer's brain tissue: a mechanism for the induction of an oxidative stress. Clin. Res. 41:395A, 1993.
22. Schmidt, A.M., Yan, S.D., Brett, J., and Stern, D. Advanced glycation endproducts: a mechanism for age-dependent vascular dysfunction. XXXII Congress of the International Union of

Physiological Sciences Abstract Book, p. 143, (#267.3/0), 1993.

23. Schmidt, A.M., Yan, S.D., Brett, J., Nowygrod, R., and Stern, D. Cellular receptors for advanced glycation endproducts: potential roles in endothelial cell and monocyte dysfunction. Proceedings of the Vth International Symposium on the Maillard Reaction: #37, 1993.
24. Hasu D, Popov D, Costache G, Simionescu N, Schmidt A-M, Stern D, and Simionescu M. The uptake of irreversible glycated albumin by murine heart capillary endothelium. 22nd Meeting of the Federation of the European Biochemical Societies. Abstract book p. 140, 1993.
25. Popov D, Hasu M, Hillebrand A, Costache G, Schmidt A-M, Simionescu N, Stern D, and Simionescu M. The receptors for AGE proteins are involved in the interaction of AGE albumin with lung capillary endothelium. 22nd Meeting of the Federation of the European Biochemical Societies. Abstract book p. 141, 1993.
26. Yan S-D, Chen X, Schmidt A-M, Brett J, Caputo C, Scott C, Yen S-H, and Stern D. Nonenzymatic glycation of tau in neurofibrillary tangles of Alzheimer's disease: a mechanism for aggregation and neurotoxicity. Neurology 44 (Suppl 2):960S, 1994.
27. Schmidt A-M, Zhang JH, Crandall J, Cao R, Yan S-D, Brett J, and Stern D. Interaction of advanced glycation endproducts with their endothelial cell receptor leads to enhanced expression of VCAM-1: a mechanism for augmented monocyte-vessel wall interactions in diabetes. FASEB J. 8 (part II):A662 (3841), 1994.
28. Wautier J-L, Schmidt A-M, Zoukourian C, Chappey O, Wautier M, Hori O, and Stern D. Diabetic erythrocytes bearing cell surface advanced glycation endproducts interact with the receptor for advanced glycation endproducts to induce oxidant stress in endothelium and increase vascular permeability. Circ. 90 (part 2):#3105, 1994.
29. Schmidt A-M, Yan S-D, Hori O, Stern D, and Miyata T. The monocyte interaction site of glucose-modified  $\beta_2$ -microglobulin is the receptor for advanced glycation endproducts. Circ. 90 (part 2):#1251, 1994.
30. Friedman J, Pauly R, Stern D, Schmidt A-M, Monticone R, and Crow M. Advanced glycation endproducts activate the expression

of monocyte and smooth muscle cell chemoattractants by vascular smooth muscle cells. Circ.90 (part 2):#1567,1994.

31. Schmidt, A-M, Hori O, Yan S-D, Cao R, Ogawa S, Matsumoto M, Zoukourian C, Chappey O, Wautier M-P, Wautier J-L, and Stern D. Cellular receptors for advanced glycation endproducts. Intl. Diabetes Meeting. Published in meeting proceedings, 1994.
32. Bhattacharya J, Minamiya Y, Schmidt A, Stern D, Ying X. Receptor-mediated increased lung capillary hydraulic conductivity by advanced glycation endproducts. In press, Microcirculation, 1995.
33. Bhattacharya J, Minamiya Y, Schmidt A, Stern D, Ying X. The receptor for advanced glycation endproducts (RAGE) mediates increased lung capillary hydraulic conductivity of diabetic rats. FASEB 9 (Part I): #2408, 1995.
34. Hori O, Cao R, Brett J, Stern D, and Schmidt A-M. The receptor for advanced glycation endproducts interactions with amphoterin in the developing nervous system to promote neurite outgrowth. FASEB 9 (Part I): #2212, 1995.
35. Schmidt A-M, Hori O, Cao R, Brett J, Pauly R, Crow M, and Stern D. Receptor for advanced glycation endproducts: modulation of vascular homeostatic properties in diabetic vessels. Euroconference on red cell-endothelial interactions. Abstract booklet, 1994.
36. Zoukourian C, Chappey O, Schmidt A-M, Wautier M-P, Hori O, Capron L, Stern D, and Wautier J-L. Consequences on vascular functions of erythrocyte-endothelial cell interactions in diabetic rats. Euroconference on red cell-endothelial interactions. Published in Proceedings of meeting, 1994.
37. Miyata T, Maeda K, Hori O, Stern D, and Schmidt A-M. Monocyte interactions of nonenzymatically glycated  $\beta_2$ -microglobulin are mediated by the receptor for advanced glycation endproducts. Submitted, 1995.
38. Popov D, Hasu M, Schmidt A-M, Hori O, Simionescu N, and Simionescu M. Uptake and transport of advanced glycation endproduct (AGE) albumin by endothelial cells: role of the receptor for AGEs (RAGE). Submitted, 1995.
39. Schmidt A-M, Crandall J, Hori O, Cao R, Stern D. Elevated plasma levels of vascular cell adhesion molecule-1 are a marker of vascular dysfunction in diabetic patients with microalbuminuria. Clin. Res. #307A, 1995.

40. Wautier, J-L, Zoukourian C, Chappey O, Wautier M-P, Guillausseau P, Cao R, Hori O, Stern D, and Schmidt A-M. Receptor-mediated endothelial cell dysfunction in diabetic vasculopathy: soluble receptor for advanced glycation endproducts blocks hyperpermeability. Clin. Res. #215A, 1995.
41. Lander, H., J. Ogiste, R. Moss, D. Stern, and AM Schmidt. Advanced Glycation Endproducts (AGEs) induce activation of nuclear factor-kB (NF-kB) by a signaling mechanism involving p21<sup>ras</sup> and MAP kinase via the Receptor for AGEs (RAGE). Circ. 92 (8):#532, 1995.
42. Wautier, JL, O. Chappey, MP Wautier, C. Zoukourian, D. Weil, D. Stern, and A.M. Schmidt. Diabetic vasculopathy: central role of oxidant stress in diabetic vascular hyperpermeability. Circ. 92 (8):#1093, 1995.
43. Schmidt, A.M., O. Hori, J. Zhang, R. Cao, SD Yan, M. Nagashima, N. Guences, G. Fuller, J. Morser, and D. Stern. Receptor-dependent hyperfibrinogenemia in diabetic mice: reversal by blockade of the Receptor for Advanced Glycation Endproducts. Circ. 92 (8):3333, 1995.
44. Wautier, JL, MP Wautier, AM Schmidt, C. Zoukourian, O. Hori, L. Capron, O. Chappey, and D. Stern. Advanced Glycation Endproducts on the surface of diabetic red cells bind to the vessel wall via a specific receptor inducing an oxidant stress in the vasculature. Pharmacol. Res. (Proceedings of 1st European Congress of Pharmacology) p. 164, 1995.
45. Spanier, T. M Oz, H Levin, D Stern, E Rose and AM Schmidt. Disseminated Intravascular Coagulation in patients with Left Ventricular Assist Devices. International Society for Heart and Lung Transplantation, abstract #227, 1996.
46. Yan, SD, X Chen, J. Fu, M, Chen, G. Godman, D. Stern and AM Schmidt. RAGE: a receptor up-regulated in Alzheimer's Disease (AD) on neurons, microglia and cerebrovascular endothelium that binds amyloid-b peptide (AB) and mediates induction of oxidant stress. American Association of Neurology, 1995
47. Smith SD, Fu C, Bendich A, Appel G, Stern D and AM Schmidt. Antioxidant intervention and diabetic renal disease. J. Am. Soc. Nephrol. 7:1365, 1996.
48. Yuzawa Y, Akahori T, Naruyama T, Hotta N, Hori O, Schmidt AM, Stern D and S. Matsuo. J. Am. Soc. Nephrol. 7:1880, 1996.



49. Park L, Hori O, Yan SD, Zou YS, Verstuyft J, Rubin EM, Liu JK, Yeo HC, Ames BN, Andaz S, Stern D and AM Schmidt. An accelerated atherosclerosis model in diabetic apolipoprotein E knockout mice: vascular accumulation of Advanced Glycation Endproducts and enhanced expression of their cellular receptor, RAGE. *Circ.* 94 (8):#200, 1996.
50. Spanier TB, Rose S, Schmidt AM, and S Itescu. Interactions between dendritic cells and T cells on the surface of Left Ventricular Assist Devices leads to a TH2 pattern of cytokine production and B cell hyperactivity in vivo. *Circ.* 94 (8):#1708, 1996.
51. Spanier TB, Oz MC, Hori O, Li J, Levin HR, Itescu S, Rose EA, Stern DM and AM Schmidt. Adsorption of circulating dendritic and monocytic cells by textured surface left ventricular assist devices: a model for sustained cellular activation of procoagulant and proinflammatory responses. *Circ.* 94 (8):#4061, 1996.
52. Wautier JL, Chappey O, Wautier MP, Boval B, Stern D and AM Schmidt. Interaction of diabetic erythrocytes bearing advanced glycation endproducts with the endothelial receptor RAGE induces generation of reactive oxygen intermediates and cellular dysfunction. *Circ.* 94 (8):#4139, 1996.
53. Schmidt AM. The Receptor for Advanced Glycation Endproducts (RAGE): Implications for the pathogenesis of diabetic complications. *Biomedicine and Pharmacotherapy* 50 (8):395, 1996.
54. Spanier T., Minanov O., Michler R., Stern, D., Rose, E., and Schmidt AM. Active site-blocked Factor IXa (IXai): a novel anticoagulant for use in cardiopulmonary bypass that does not impair extravascular hemostasis. *New York Society for Thoracic Surgery*, 1996.
55. Schmidt, A.M. Interaction of Advanced Glycation Endproducts (AGEs) with their cellular receptor RAGE: implications for vascular and inflammatory cell dysfunction in diabetes. Abstract booklet, Baker Medical Research Institute symposium on "Atherosclerosis and the Vessel Wall," p. 25, 1997.
56. Spanier T., Minanov, O., Oz, M., Kisiel, W., Michler R., Stern, D., Rose, E., and Schmidt AM. Active site blocked IXa: selective single agent antithrombotic therapy in canine cardiopulmonary bypass. *Society for Thoracic Surgery*, 1997.
57. Spanier T., Choudhri A., Beck J., Mongero L., Diugiud D., Schmidt AM., Oz M. Intraoperative heparin resistance results

from preoperative heparin therapy and is successfully treated with Antithrombin III replacement. Society for Thoracic Surgery, 1997.

58. Wu J, Rogers L, Stern D, Schmidt AM and Chiu DTW. The soluble receptor for Advanced Glycation Endproducts (sRAGE) ameliorates impaired wound healing in diabetic mice. Abstract booklet, Plastic Surgery Research Council, Abstract #77, p. 43, 1997.
59. Schmidt, A.M. Prevention of diabetic complications. Abstract booklet, 10th annual Congress, Mexican Diabetes Federation, 1997.
60. Lalla, E., Weidman, E., Lamster, I.B. and Schmidt, A.M. Advanced Glycation Endproducts (AGEs) in diabetic periodontal disease. Sunstar-Chapel Hill Symposium, Periodontal Diseases and Human Health, Abstract booklet, p. 15, 1997.
61. Lalla, E., Feit, M., Lamster, I.B., and Schmidt, A.M. Advanced Glycation Endproducts and diabetic periodontal disease in a murine model. Sunstar-Chapel Hill Symposium, Periodontal Diseases and Human Health, Abstract booklet, p. 34, 1997.
62. Lalla, E., Schmidt, A.M., Feit, M., and Lamster, I.B. Murine model of accelerated periodontal disease in diabetes. J. Dent. Res. 76 (IADR):#1105, p. 152, 1997.
63. Park, L., Barile, G.R., Chang, S., Reppucci, V.S., Schiff, W.M., and A.M. Schmidt. Advanced Glycation Endproducts (AGEs) in proliferative diabetic retinopathy and proliferative vitreoretinopathy. Abstract Book, Investigative Ophthalmology and Visual Science, #3303, S714, 1997.
64. Barile, G.R., Chang, S., Park, L., Reppucci, V.S., Schiff, W.M., and A.M. Schmidt. Soluble cellular adhesion molecules in proliferative diabetic retinopathy and proliferative vitreoretinopathy. Abstract Book, Investigative Ophthalmology and Visual Science, #5466, S1176, 1997.
65. Schmidt, A.M. Interaction of Advanced Glycation Endproducts (AGEs) with their receptor RAGE: implications for the biology of aging. Abstract book, 1997 World Congress of Gerontology, 16th congress of the International Association of Gerontology, #228, p. 75, 1997.
66. Raman, K.R., McCrudden, K.W., Lu, Y., Ginsberg, M.D., Ferran, L.Jr., Stern, D., Huang, L-S., and A.M. Schmidt. Diabetes in male human ApoB transgenic mice results in accelerated atherosclerosis with minimal modification of lipid profile.

Abstract booklet, Council on Arteriosclerosis, American Heart Association, #9411, p. 111, 1997.

67. Schmidt, A.M., Yan, S.D., and Stern, D. The V-Domain of Receptor for Advanced Glycation Endproducts (RAGE) mediates binding of AGEs: a novel target for therapy of diabetes. *Circ. (Suppl.)*, 96:#194, p. I-37, 1997.
68. De Caterina, R., Basta, G., Lazzerini, G., and Schmidt, A.M. Advanced Glycation Endproducts (AGEs) induce multiple endothelial leukocyte molecule expression partly through anti-oxidant pathways. *Circ. (Suppl.)*, 96:#630, p. 1-112, 1997.
69. Lee, K.J., Lu, Y., Ginsberg, M.D., Ferran, L.Jr., Stern, D.M., and Schmidt, A.M. A murine model of accelerated atherosclerosis in diabetic LDL Receptor deficient mice. *Circ. (Suppl.)*, 96:#968, p. 1-175, 1997.
70. Spanier, T.B., Oz, M.C., Kisiel, W., Stern D.M., Rose, E.A., and Schmidt, A.M. Active site blocked Factor Ixa is a selective alternative anticoagulant to heparin in cardiopulmonary bypass. *Circ. (Suppl.)*, 96:#1672, p. 1-300, 1997.
71. Juhasz, O., Hiraoka, H., Cheng, L., Schmidt, A.M., Stern, D.M., and Crow, M. T. The stimulation of Monocyte chemoattractant Protein-1 expression by Advanced Glycosylation Endproducts requires the cytosolic domain of the 35-50 kD receptor, RAGE. *Circ. (Suppl.)*, 96:#2030, p. 1-363, 1997.
72. Park, L., Raman, K.G., Lee, K.J., Lu, Y., Ginsberg, M.D., Ferran, L.Jr., Stern, D.M., and Schmidt, A.M. A murine model of accelerated diabetic atherosclerosis: suppression by soluble receptor for Advanced Glycation Endproducts. *Circ. (Suppl.)*, 96:#3079, p.1-550, 1997.
73. Spanier, T.B., Oz, M.C., Sun, B.C., and Schmidt, A.M. NF-kB inhibition with aspirin in textured surface Left Ventricular Assist Device recipients attenuates the proinflammatory/procoagulant response. *Circ. (Suppl.)*, 96:#3365, p. 1-603, 1997.
74. Li, J.F., Qu, X.Q., and A.M. Schmidt. The Sp1 sites in the promoter of Receptor for AGE (RAGE) are required for induction of RAGE expression in neuronal cells by amphoterin. *FASEB Journal* 12 (#4): #1861, A320,1998.
75. Raman, K.G., Lu, Y., Tsai, M., Ferran, L. Jr., Chow, W.S., Berglund, L.S., Huang, L.S., and A.M. Schmidt. A model of accelerated atherosclerosis in diabetic mice overexpressing of

apo B: soluble receptor for Advanced Glycation Endproducts.  
FASEB Journal 12 (#4): #616, A106, 1998.

76. Makker G., Lee, K., Fan, L., Lindenberg, N., Lu, Y., Chow, W.S., and A.M. Schmidt. A murine model of accelerated diabetic atherosclerosis with minimal modification of lipid profile. FASEB Journal 12 (#4): #2795, A481, 1998.
77. Taguchi, A., Blood, D.C., Lu, A., and A.M. Schmidt. Soluble receptor for AGE (sRAGE) suppresses growth of C6 glioma tumors in nude mice. FASEB Journal 12 (#4): #5502, A950, 1998.
78. Lalla, E., Lamster, I.B., Feit, M., Huang, L., and A.M. Schmidt. Host factors in a model of diabetes-associated periodontal disease. J. Dental Research 77(B), #279, p. 666, 1998.
79. Makker, G., Vorp, D., Lindenberg, N., Fan, L., Wang, D.H.J., Qu, W., Stern, D., and Schmidt, A.M. Maintenance of Vascular Structural Integrity in LDL receptor null mice treated with soluble Receptor for AGE (sRAGE). Circ. (Suppl). 98: #0060, p. I-12, 1998.
80. Huang, J., Kim, L.J., Kisiel, W., Schmidt, A.M., Choudri, T.F., Hoh, B., Connolley, E.S., and Pinsky, D. Inhibition of Factor IXa-dependent coagulation improves efficacy of tPA in stroke without increasing intracerebral hemorrhage. Circ. (Suppl). 98: #0150, p. I-I, 1998.
81. Li, J., Qu, X., Fu, C., and Schmidt, A.M. The cytosolic domain of Receptor for AGE (RAGE) interacts with Shc (Src-homologous collagen like protein) to mediate signal transduction. Circ. (Suppl). 98: #0610, p. I, 1998.
82. Makker, G., Fan, L., Lindenberg, N., Lu, Y., Qu, W., Lee, K.J., Stern, D., and Schmidt, A.M. Suppression of accelerated atherosclerosis in diabetic LDL receptor null mice by soluble receptor for AGE (sRAGE). Circ. (Suppl). 98: #1623, p. I-310, 1998.
83. Fu, C., Pischetsrieder, M., Hofmann, M., Yan, S.F., Stern, D., Schmidt, A.M. Carboxymethyl-lysine AGE modifications of proteins are ligands for RAGE that activate cell signaling pathways. Circ. Suppl. 98: # 1651, p. I, 1998.
84. Hofmann, M., Drury, S., Fu, C., Li, J., Qu, X., Qu, W., and Schmidt, A.M. EN-RAGE (Extracellular Novel RAGE binding protein) activates endothelial cells and macrophages to

mediate inflammatory responses. Circ. (Suppl). 98: #1657, p. I, 1998.

85. Raman, K.G., Tsai, M., Lu, Y., Ferran, L., Fan, L., Lindenberg, N., Stern, D., Berglund, L., Huang, L.S., and Schmidt, A.M. Genetically diabetic (db/db) transgenic mice overexpressing human apolipoprotein B (HuBTg) exhibit accelerated atherosclerosis. Circ. (Suppl). 98: #2445, p. I-465, 1998.
86. Spanier, T., Chen, J., Kisiel, W., Parhar, R., Al-Mohanna, F., Edward, N.E., Schmidt, A.M., and Stern, D. Selective Intravascular anticoagulation with a Factor IX inhibitor separates individual procoagulant stimuli on CPB. Circ. (Suppl). 98: # 3812, p. I-727, 1998.
87. DeCaterina, R., Basta, G., Lazzerini, G., Massaro, M., Tanganelli, P., and Schmidt, A.M. Global endothelial activation induced by AGEs and its relevance for inflammation. Circ. (Suppl). 98: #4167, p. I-795, 1998.
88. Spanier, T., Chen, J., Kisiel, W., Parhar, R., Al-Mohanna, F., Edwards, N.E., Stern, D., and Schmidt, A.M. Factor IX inhibition during primate cardiopulmonary bypass reduces complement, platelet and leukocyte activation compared with heparin. Circ. (Suppl). 98: #3926, p. I-748-749, 1998.
89. Tanji, N., Markowitz, G.S., Ward, L., Pischetsrieder, M., Fu, C., Schmidt, A.M., and D'Agati, V.D. The expression of AGE and their cellular receptor (RAGE) in diabetic nephropathy and nondiabetic renal disease. J. American Society Nephrology 9:#A2701, p. 529A, 1998.
90. Hofmann, M., Fu, C., Drury, S., Stern, D., and A.M. Schmidt. Receptor for AGE (RAGE): Novel Proinflammatory ligands and insights into inflammation. Abstract, Keystone Symposium: Inflammatory Paradigms and the Vasculature, #018, p 28., 1999.
91. Salahudeen, A.K., H. Huang, D. Stern, and A.M. Schmidt. Administration of soluble receptor for advanced glycation endproducts in db/db mice suppresses abnormalities in the early and late stages of diabetic nephropathy. FASEB Journal 13: 198.4, 1999.
92. Taguchi, A., Blood, D.C., del Toro, G., A. Lu, A. Canet, W. Qu, and A.M. Schmidt. Blockade of amphoterin-RAGE interaction suppresses lung metastases in murine Lewis lung carcinoma. FASEB Journal 13:292.9, 1999.

93. Hofmann, M.A., Lu, Y., Schermer, C., Ferran, L., Kohl, B., Lalla, E., and Schmidt, A.M. Modulation of expression of Receptor for AGE (RAGE) by homocysteine in cultured endothelium and diabetic mice. Diabetes 48 (Supplement 1):#0132, p. A31, 1999.
94. Hofmann, M.A., Lu, Y., Ferran, L.J., Jr., Kohl, B., and Schmidt, A.M. Homocysteine induces vascular activation in vitro and in vivo: accelerated atherosclerosis develops in apo E null mice with hyperhomocysteinemia. Circulation (Supplement): 100: #220, pg. I - 44, 1999.
95. Hofmann, M.A., Ferran, L.J., Jr., Lalla, E., Ryu, M., Caliste, X., Kohl, B., and Schmidt, A.M. Enhanced activity of MMP-9 in vascular tissue from diabetic, hyperhomocysteinemic apo E null mice: possible mechanisms underlying plaque instability in diabetes. Circulation (Supplement) 100: #1307, pg. I - 252, 1999.
96. Basta, G., Lazzerini, G., Massaro, M., Tanganelli, P., Fu, C., Schmidt, A.M., and De Caterina, R. Intracellular reactive oxygen species mediate endothelial VCAM-1 and E-selectin, but not ICAM-1 expression by Advanced Glycation Endproducts. Circulation (Supplement): 100 #3234, pg. I - 612, 1999.
97. Li, J., Wu, J., Stern, D.M., and Schmidt, A.M. Administration of soluble Receptor for Advanced Glycation Endproducts (sRAGE) enhances wound repair in diabetic mice. Circulation (Supplement): 100: #3651, pg. I - 692, 1999.
98. Tsai, M., Schermer, C., Lu, Y., Ferran, L., Jr., Moss, R., Casey, J., Do, E., Stern, D.M., Berglund, L., Huang, L.S., and Schmidt, A.M. Modulation of lipid profile and atherosclerosis in genetically diabetic transgenic mice overexpressing human apolipoprotein B. Circulation (Supplement) 100: #3673, pg. I - 696, 1999.
99. Rong, L.L., Bernstein, E., Hays, A.P., Trojaborg, W., Qu, W., Stern, D., and Schmidt, A.M. Receptor for AGE (RAGE) and its ligands, EN-RAGEs and amphoterin, are expressed in injured peripheral nerve and modulate regeneration in a murine model of unilateral sciatic nerve crush. Abstracts of the 30th annual meeting of the Society of Neuroscience 26: # 114.4, p. 303, 2000.
100. Dumar, S.R., Miao, W., Ghiso, J., Frangione, B. Hofman, F., Yan, S.D., Schmidt, A.M., Stern, D., and Zlokovic, B.V. RAGE at the blood-brain barrier mediates neurovascular dysfunction caused by amyloid- $\beta$  1-40 peptide. Abstracts of the 30th

annual meeting of the Society of Neuroscience 26: #275.19, p. 741, 2000.

101. Stern, D.M., Zhu, Y., Zhu, A., Du, H., Schmidt, A.M., and Yan, S.D. Enhanced neuronal stress in double transgenic mice with targeted overexpression of RAGE and mutant APP. Abstracts of the 30th annual meeting of the Society of Neuroscience 26: #491.14, p. 1319, 2000.
102. Lue, L.F., Walker, D.G., Brachova, L., Rogers, J., Shen, Y., Schmidt, A.M., Stern, D.M., and Yan, S.D. Expression of RAGE and RAGE-dependent cellular activation factors in Alzheimer's disease and by human postmortem brain microglia. Abstracts of the 30th annual meeting of the Society of Neuroscience 26: #680.14, p. 1831, 2000.
103. Kalra, V.K., Stins, M. A., Kim, K.S., Miller, C.A., Yan, S.D., Schmidt, A.M., Stern, D.M., Tokes, Z.A., Zlokovic, B.V., and Giri, R. Effect of endothelial cell polarity on A  $\beta$ -induced migration of monocytes across cultured brain endothelial cell monolayers of normal and AD individuals. Abstracts of the 30th annual meeting of the Society of Neuroscience 26: #859.2, p. 2287, 2000.
104. Kislinger, T.R., Tanji, N., Qu, W., Goova, M.T., Wendt, T.M., Lu, Y., Bucciarelli, L.G., Hofmann, M.A., Ferran, L.J., Pischetsrieder, M., Stern, D.M., and Schmidt, A.M. Blockade of Receptor for AGE (RAGE) suppresses vascular inflammation and hypercoagulability in apo E null mice with type 1 diabetes. Circulation (Supplement) 102: #187, II-41, 2000.
105. Lalla, E., Lamster, I.B., Spessot, A.L, Lu, Y., Papapanou, P.N., Stern, D.M., and Schmidt, A.M. Oral infection with an established periodontal pathogen accelerates atherosclerosis in apo E null mice. Circulation (Supplement) 102: #188, II-41, 2000.
106. Bucciarelli, L.G., Qu, W., Wendt, T.M., Goova, M.T., Bakr, S., Hwang, Y.C., Stern, D.M., and Schmidt, A.M. Blockade of Receptor for AGE (RAGE) suppresses levels of cardiac endothelial- and inducible nitric oxide synthase in diabetic mice. Circulation (Supplement) 102: #563, II-117, 2000.
107. Wendt, T.M., Bucciarelli, L.G., Lu, Y., Qu, W., Fan, L, Tsai, M., Ferran, L.J., Stern, D.M., and Schmidt, A.M. Accelerated atherosclerosis and vascular inflammation develop in apo E null mice with type 2 diabetes. Circulation (Supplement) 102: #1125, II-231, 2000.

108. Bucciarelli, L.G., Qu, W., Lu, Y., Wendt, T.M., Kislinger, T.R., Goova, M.T., Ferran, L.J., Stern, D.M., and Schmidt, A.M. Blockade of Receptor for AGE (RAGE) suppresses progression of established atherosclerotic lesions in apo E null mice with type 1 diabetes. Circulation (Supplement) 102: #1128, II-232, 2000.
109. Zhou, Z.M., Marso, S.P., Schmidt, A.M., Stern, D.M., Qu, W., Forudi, F., Wang, K., Lincoff, A.M., and Topol, E.J. Blockade of Receptor for AGE (RAGE) suppresses neointimal formation in diabetic rat carotid artery injury model. Circulation (Supplement) 102: #1202, II-246, 2000.
110. Hofmann, M.A., Lalla, E., Lu, Y., Ryu, M., Tanji, N., Ferran, L.J., Kohl, B., Kisiel, W., Stern, D.M., and Schmidt, A.M. Dietary enrichment in folate, vitamins B6/B12 suppresses accelerated atherosclerosis and aneurysm formation in hyperhomocysteinemic mice. Circulation (Supplement) 102: #1232, II-252, 2000.
111. Kayano, K., Okada, K., Schmidt, A.M., Kisiel, W., Minamoto, K., and Pinsky, D.J. Inhibition of factor Ixa-dependent coagulation ameliorates murine pulmonary ischemia/reperfusion injury. Circulation (Supplement) 102: #2040, II-419, 2000.
112. Lee, D.C., Qu, W., Lu, Y., Stern, D.M., and Schmidt, A.M. Blockade of RAGE suppresses growth, metastases and progression of mammary tumors in a murine model of breast cancer. Surgical Forum 52: 274-276, 2001.
113. Bucciarelli, L.G., Wendt, T.W., Qu, W., Lu, Y., Wolf, B.M., Lalla, E., Hofmann, M.A., Goova, M.T., Kashyap, Y., Stern, D.M., and Schmidt, A.M. Blockade of RAGE halts macrophage and smooth muscle cell migration and activation in established atherosclerosis in diabetic apo E null mice. Circulation (Supplement) 104: #562, II-117, 2001.
114. Basta, G., Lazzerini, G., Del Turco, S., O'Loghen, A., Schmidt, A.M., Ratto, G.M., and De Caterina, R. NAD(P)H oxidase-mediated generation of reactive oxygen species is implicated in the endothelial induction of VCAM-1 and ICAM-1, but not E-selectin by Advanced Glycation Endproducts. Circulation (Supplement) 104: #1114, II-231, 2001.
115. Wendt, T.M., Tanji, N., Kislinger, T., Bucciarelli, L.G., Qu, W., Lu, Y., Lalla, E., Moser, B., Markowitz, G., D'Agati, V., Stern, D.M., and Schmidt, A.M. Blockade of Receptor for AGE (RAGE) suppresses albuminuria and glomerulosclerosis in murine diabetic kidney: implications for podocyte activation in the



pathogenesis of diabetic nephropathy. Circulation (Supplement) 104: #1142, II-237, 2001.

116. Wendt, T.M., Bucciarelli, L.G., Yan, S.F., Lu, Y., Qu, W., Wolf, B.M., Lalla, E., Goova, M.T., Moser, B., Stern, D.M., and Schmidt, A.M. Induction of hypoxic stress in diabetic apo E null mice alters expression of genes linked to maladaptive stress responses in the heart. Circulation (Supplement) 104: #1478, II-307, 2001.
117. Hofmann, M.A., Qu, W., Moser, B., Bucciarelli, L.G., Hudson, B., Stickland, M., Grant, P.J., Stern, D.M., and Schmidt, A.M. RAGE (G82S) upregulates the inflammatory response: implications for amplification of vascular inflammation. Circulation (Supplement) 104: #1539, II-319, 2001.
118. Sakaguchi, T., Sousa, M., Yan, S.D., Yan, S.F., Duda, S., Arnold, B., Nawroth, P.P., Schmidt, A.M., Stern, D.M., and Naka, Y. Restenosis: central role of RAGE-dependent neointimal expansion. Circulation (Supplement) 104: #2471, II-522, 2001.
119. Wang, C.Y., Okada, M., Schmidt, A.M., Liu, R., Takuma, S., Yan, S.D., Homma, S., Oz, M.C., Stern, D.M., and Pinsky, D.J. RAGE blockade suppresses the late development of cardiac allograft vasculopathy. Circulation (Supplement) 104: #3567, II-758, 2001.
120. Hofman, F., Kumar, S.R., Maness, L.M., Larue, B.A., Welch, D.M., Schmidt, A.M., Yan, S.D., Stern, D., and Zlokovic, B.V. Amyloid- $\beta$  peptide (1-40) reduction in cerebral blood flow is consequent to RAGE-mediated induction of endothelin-1. Abstracts of the 31st annual meeting of the Society of Neuroscience #128.5, p. 65, 2001.
121. Yu, J., Zhu, H., Pettigrew, L.C., Yan, S.D., Schmidt, A.M., Stern, D., and Kindy, M.S. Infusion of soluble RAGE inhibits A $\beta$  amyloid deposition in APP transgenic mice. Abstracts of the 31st annual meeting of the Society of Neuroscience #1322.13, p. 166, 2001.
122. Rong, L.L., Yan, S.F., Hans-Wagner, D., Goova, M.T., Song, F., Hays, A.P., Stern, D.M., and Schmidt, A.M. Receptor for AGE expressed in macrophages and neurons regulates peripheral nerve repair after injury. Abstracts of the 31st annual meeting of the Society of Neuroscience #351.4, p. 179, 2001.
123. Lue, L.F., Walker, D.G., Schmidt, A.M., Stern, D.M., and Yan, S.D. Microglial and astrocytic responses in RAGE/PDAPP

transgenic mice. Abstracts of the 31st annual meeting of the Society of Neuroscience #890.12, p. 459, 2001.

124. Lee, D.C., Qu, W., Lu, Y., Stern, D.M., and Schmidt, A.M. Blockade of RAGE suppresses growth, metastases and progression of mammary tumors in a murine model of breast cancer. *Journal of the American College of Surgeons* 191 (suppl) S62, 2001.
125. Stern, D.M., Yan, S.D., Submamaryan, R., LaRue, B., Ghiso, J., Hofman, F., Schmidt, A.M., and Zlokovic, B. Amyloid angiopathy and the Receptor for Advanced Glycation Endproducts (RAGE): Interactions of Amyloid- $\beta$  with the Blood Brain Barrier and Neurons. Abstract #5 of the Keystone Symposium, "Inflammatory Paradigms and the Vasculature II," p. 23, 2002.
126. Wendt, T., Bucciarelli, L., Hofmann, M.A., Stern, D.M., and Schmidt, A.M. RAGE: Insights into Proinflammatory Mechanisms in Diabetes and Immune/Inflammatory Disorders. Abstract #27 of the Keystone Symposium, "Inflammatory Paradigms and the Vasculature II," p. 29, 2002.
127. Bucciarelli, L.G., Wendt, T.M., Qu, W., Lu, Y., Lalla, E., Goova, M.T., Rong, L.L., Moser, B., Lee, D.C., Kashyap, Y., Stern, D.M., and Schmidt, A.M. RAGE blockade suppresses migration and activation of mononuclear phagocytes and vascular smooth muscle cells in diabetic vascular lesions: implications for atherosclerotic lesion stabilization. Abstract #114 of the Keystone Symposium, "Inflammatory Paradigms and the Vasculature II," p. 43, 2002.
128. Lee, D.C., Xu, Z., Qu, W., Lu, Y., Anderson, D., Stern, D.M., and Schmidt, A.M. Blockade of RAGE suppresses growth and metastases of mammary tumors in a murine model of breast cancer. *Proceedings of the American Association for Cancer Research* 43: 197: 2002.
129. Lalla, E., Lamster, I.B., Jerud, A.P., Giacona, M.B., Bucciarelli, L.G., Wendt, T.M., Tucker, S., Papapanou, P.N., and Schmidt, A.M. Mechanisms underlying acceleration of atherosclerosis in ApoE null mice by oral infection with *Porphyromonas gingivalis*. *Journal of Dental Research*; 81 (Spec. Issue A): #2534, 2002.
130. Giacona, M.B., Lalla, E., Lamster IB, Spector M, Papapanou PN, Schmidt AM. *Porphyromonas gingivalis* promotes foam cell formation by human monocyte-derived macrophages: potential role in atherogenesis. *Journal of Dental Research*; 81 (Spec. Issue A): 2535, 2002.
131. Ekong, U., Zeng, S., Bhagat, G., Guarrera, J., Schmidt, A.M., and Emond, J. Blockade of RAGE suppresses acetaminophen-

induced hepatic necrosis and improves host survival in a murine model. JPGN 35: #3, 2002.

132. Wendt, T.M., Moser, B., Bucciarelli, L.G., Qu, W., Lu, Y., Lee, D.C., Stein, G., Nawroth, P.P., Stern, D.M., D'Agati, V.D., and Schmidt, A.M. Blockade of the Receptor for AGE (RAGE) suppresses albuminuria and glomerulosclerosis in murine adriamycin induced focal segmental glomerulosclerosis. J. American Society of Nephrology 13:161A, 2002.
133. Yan, S.D., Zhang, H., Caspersen, C., Trinchese, F., Battaglia, F., Lue, L., Walker, D., Buttini, M., Schmidt, A.M., Strohmeier, R., Yi, W., Hyslop, P., Stern, D., and Orancio, O. RAGE potentiates Abeta-induced perturbation of neuronal function in transgenic mice. Society for Neuroscience 32nd Annual Meeting #19.3, p. 6, 2002.
134. Rong, L.L., Yan, S.F., Yan, S.D., Hans-Wagner, D., Song, F., Stern, D.M., Prezedborski, S., Hays, A.P., and Schmidt, A.M. RAGE-dependent mechanisms accelerate neuronal dysfunction in a murine model of amyotrophic lateral sclerosis. Society for Neuroscience 32nd Annual Meeting #719.2., p. 53, 2002.
135. Yan, S.F., Bucciarelli, L.G., Harja, E., Wang, X., Lu, Y., Schmidt, A.M., and Stern, D. Egr-1 promotes atherogenesis: mice deficient in egr-1 and apo E display decreased atherosclerosis. Circulation 106 (8): 605, 2002.
136. Pachydaki, S.I., Chang, S., Zhang, X., Cataldegirmen, G., Rong, L.L., Schmidt, A.M., and Barile G.R. Expression of RAGE and its ligands S100/calgranulins and amphoterin is increased in the vitreous cavity of patients with proliferative retinal disease. Scientific Paper. Investigative Ophthalmology Visual Sciences 43: E-Abstract, 3861, 2002.
137. Moser, B., Wendt, T.M., Ankersmit, J.H., Hofmann, M., Bucciarelli, L.G., Hudson, B.I., Schuster, M., Goova, M.T., Szabolcs, M.J., Schmidt, A.M., and Itescu, S. Blockade of Receptor for AGE (RAGE) suppresses lymphocyte proliferation in mixed lymphocyte culture. J Heart Lung Transplantation 23 (1S), #82, 2003.
138. Lee, S.E., Pachydaki, S.I., Weisberg, M.P., Tari, S.R., Schmidt, A.M., Chang, S., Barile, G.R. Induction of PVR in a murine model: dispase-induced disease progresses in the presence of a retinal tear. Scientific Poster. Investigative Ophthalmology Visual Sciences 44: E-Abstract, #3010, 2003.
139. Barile, G.R., Pachydaki, S.I., Tari, S.R., Lee, S.E., Rong, L.L., Bucciarelli, L.G., Wendt, T., Sakal, C., Stern, D.M.,

and Schmidt, A.M. Accelerated vascular changes of nonproliferative diabetic retinopathy in a murine model of diabetes. Scientific Paper. Investigative Ophthalmology Visual Sciences 44: E-Abstract, #3294, 2003.

140. Pachydaki, S.I., Tari, S.R., Donmoyer, C.M., Lai, K., Lee, S.E., Schmidt, A.M., and Barile, G.R. Electrophysiologic findings in a murine model of diabetes. Scientific Poster. Investigative Ophthalmology Visual Sciences 44: E-Abstract, #3873, 2003.
141. Tari, S.R., Pachydaki, S.I., Lee, S.E., Schiff, W.M., Chang, S., Schmidt, A.M., and Barile, G.R. S100/calgranulin and RAGE expression in PDR and PVR. Scientific Poster. Investigative Ophthalmology Visual Sciences 44: E-Abstract, #3039, 2003.
142. Lalla, E., Lamster, I.B., Brandt, J.S., Guo, T., Yan, S.F., and Schmidt, A.M. Accelerated alveolar bone loss in diabetic mice over-expressing monocyte RAGE. Journal of Dental Research 82 (Spec. Issue B): p. 27, #118, 2003.
143. Giacona, M.B., Papapanou, P.N., Lamster, I.B., Schmidt, A.M., and Lalla, E. Determinants of foam cell formation by human monocyte-derived macrophages infected with Porphyromonas gingivalis. Journal of Dental Research 82 (Spec. Issue B): p. 28, #123, 2003.
144. Lee, L.K., Song, F., and Schmidt, A.M. Laser doppler imaging of vascular reactivity in mice. 89th Annual Clinical Congress Abstract, American College of Surgeons, 2003.
145. Rong, L.L., Yan, S.F., Adebayo, A., Lu, Y., Hays, A.P., Trojaborg, W., and Schmidt, A.M. RAGE-dependent signaling in peripheral neurons and macrophages regulates peripheral nerve repair. Society for Neuroscience 32nd Annual Meeting #552.1., 2003.
146. Yan, S.F., Wendt, T., Qu, W., Liu, K., and Schmidt, A.M. Upregulation of egr-1 in hypoxic stress: central role of RAGE-dependent mechanisms. Circulation (Supplement IV): Abstract 1378, IV-290, 2003.
147. Harja, E., Lu, Y., Zou, S., Hudson, B.I., Schmidt, A.M., and Yan, S.F. Central roles for PKC $\beta$ /early growth response-1 (egr-1) axis in atherosclerosis in apolipoprotein E null mice. Circulation (Supplement IV): Abstract 1429, IV-301, 2003.
148. Andrassy, M., Harja, E., Liu, K., Zou, Y.S., Belov, D., Yan, S.D., Schmidt, A.M., and Yan, S.F. Central role for the PKC $\beta$ /egr-1 axis in neointimal expansion after acute arterial

injury. Circulation (Supplement IV): Abstract 326, IV-70, 2003.

149. Lee, L., Bucciarelli, L., Hwang, Y.C., Bakr, S., German, R., Wendt, T., Qu, W., Lu, Y., Schmidt, A.M., and Ramasamy, R. RAGE-dependent signaling in mononuclear phagocytes and endothelial cells generate oxidant stress and influences cardiac ischemic injury in diabetes. Circulation (Supplement IV): Abstract 968, IV-204, 2003.
150. Guo, J., Qu, W., Lu, Y., Ramasamy, R., D'Agati, V., Schmidt, A.M., and Wendt, T. Blockade of RAGE suppresses adriamycin-induced oxidant stress in the kidney in BALB/c mice. J. Am. Soc. Nephrol. 14:554A, 2003.
151. Tari, S.R., Lee, S.E., Tseng, J.J., Onat, D., Pachydaki, S.I., Horig, H., Noroziewicz, D.N., Yan, S.F., Schmidt, A.M., and Barile, G.R. Blockade of RAGE suppresses hypoxia-induced Egr-1 expression in the retina. Investigative Ophthalmology Visual Sciences 45: E-Abstract, #1049, 2004.
152. Sparrow, J.R., Cai, B., Zhou, J., Kim, S., Pachydaki, S.I., Nakanishi, K., and Schmidt, A.M. HNE-adducts, AGEs, RAGE and VEGF in blue-light irradiated A2E-laden RPE. Investigative Ophthalmology Visual Sciences 45: E-Abstract, #1807, 2004.
153. Toth, C.C., Schmidt, A.M., Tuor, U., Kaur, J., Zochodne, D.W., Foniok, T., Hoyte, L., Brussee, V., Barber, P., and Buchan, A. A model of diabetic cerebral white matter disease in mice: neuroimaging, histology and linkage to RAGE expression. Abstract #P02.093, American Academy of Neurology, 2004.
154. Kim, W., and Schmidt, A.M. S100-stimulated sumoylation of RAGE: a mechanism to trigger activation of NF-kB. Diabetes 53 (Supplement #2): #1857-P, A443, 2004.
155. Yan, S.F., Ramasamy, R., D'Agati, V.D., and Schmidt, A.M. Receptor for AGE (RAGE): a multiligand receptor of the immunoglobulin superfamily- implications for the pathogenesis of diabetic complications, Abstract Book, 8th International Symposium on the Maillard Reaction, p. 41, 2004.
156. Bucciarelli, L.G., Lee, L., Hwang, Y., Bakr, S., Wendt, T., Qu, W., Lu, Y., Yan, S.F., Schmidt, A.M., and Ramasamy, R. RAGE-dependent signaling mediates oxidant stress and influences cardiac ischemic injury in diabetes, Abstract Book, 8th International Symposium on the Maillard Reaction, p. 45, 2004.

157. Schmidt, A.M. Receptor for Advanced Glycation Endproducts: insights into the pathogenesis of diabetic complications. Abstract Book, 5th Annual Rachmiel Levine Symposium: Advances in Diabetes Research: from cell biology to cell therapy, p. 42, 2004.
158. Kim, W.J., Lee, L.K., Lu, Y., Hudson, B., I., and Schmidt, A.M. Sumoylated RAGE, Signal Transduction and accelerated atherosclerosis. Circulation (Supplement III) 111: #17, page 88, 2004.
159. Andrassy, M., Szabolcs, M., Yan, S.D., Liu, R., Ramasamy, R., Schmidt, A.M., and Yan, S.F. PKCbeta modulates ischemia/reperfusion injury in the heart. Circulation (Supplement III) 111: #17, page 109, 2004.
160. Moser, B., Szabolcs, M.J., Ankersmit, J.H., Hudson, B.I., Lu, Y., Qu, W., Weinberg, A., and Schmidt, A.M. Blockade of Receptor for AGE (RAGE) delays cardiac allograft rejection in a murine model by suppression of inflammation and apoptosis. Circulation (Supplement III) 111: #17, page 139, 2004.
161. Kaneko, M., Harja, E., Lerner, S., Gomez, T., Lee, L.K., Jenkins, D.G., Song, F., Bakr, S., Yan, S.F., Schmidt, A.M., and Ramasamy, R. Receptor for Advanced Glycation Endproducts: a key player in myocardial ischemic injury. Circulation (Supplement III) 111: #17, page 298, 2004.
162. Lee, L., Song, F., Harja, E., Weinberg, A., and Schmidt, A.M. Blockade of RAGE restores microvascular reactivity in diabetic apolipoprotein E null mice. Circulation (Supplement III) 111: #17, page 307, 2004.
163. Toth, C.C., Schmidt, A.M., Tuor, U., Kaur, J., Brussee, V., Yan, S.F., Tsutsui, S., and Zochodne, D. RAGE in the diabetic brain: an important pathophysiological mechanism with cerebral neurons, glia, and white matter? Abstract Book of the Annual Meeting of the Society for Neuroscience, Abstract # 448.5, 2004.
164. Yan, S.D., Mei, L., Walker, D.G., Schmidt, A.M., Stern, D., and Lue, L. Amplification of the inflammatory response and increased amyloid deposition in double transgenic mice with targeted neuronal expression of mutant APP and microglial expression of RAGE. Abstract Book of the Annual Meeting of the Society for Neuroscience, Abstract # 23.10, 2004.
165. Rong, L.L., Adebayo, A., Lu, Y., Przedborski, S., Hays, A.P., Yan, S.F., and Schmidt, A.M. Microglial RAGE accelerates mortality and neuronal dysfunction in a murine model of

familial amyotrophic lateral sclerosis. Abstract Book of the Annual Meeting of the Society for Neuroscience, Abstract # 706.2, 2004.

166. Wang, N., Wu, Z., Wang, C., Rong, L., Chen, X., Stern, D., Schmidt, A.M., and Yan, S.D. RAGE interaction with S100 activates phospho-p38, Akt and NF-kB in experimental autoimmune encephalitis (EAE) model. Abstract Book of the Annual Meeting of the Society for Neuroscience, Abstract # 936.11, 2004.
167. Guo, J.C., Qu, W., Ramasamy, R., Yan, S.F., D'Agati, V.D., and Schmidt, A.M. RAGE activates membrane-bound NADPH oxidase in podocytes via ERK1/2 MAP kinase. J. Am. Soc. Nephrol. 15:481a, 2004.
168. Zeng, S., Cataldegirmen, G., Feirt, N., Ippagunta, N., Dun, H., Qu, W., Lu, Y., Rong, L.L., Weinberg, A., Lefkowitz, J., Yan, S.F., Schmidt, A.M., and Emond, J.C. RAGE limits regeneration after massive liver injury by coordinated suppression of TNF-alpha and NF-kB Hepatology 40: #4 (Supplement): 284A, 2004.
169. Zeng, S., Ippagunta, N., Dun, H., Feirt, N., Qu, W., Yan, S.F., Schmidt, A.M., and Emond, J.C. Receptor for AGE (RAGE) dependent modulation of Egr-1 in total ischemia and reperfusion injury to the liver in a murine model. Hepatology 40: #4 (Supplement): 377A, 2004.

#### **INVITED PRESENTATIONS**

1. "Endothelial cell and mononuclear phagocyte receptors for advanced glycation endproducts," Gordon Research Conference, Vascular Biology, Colby Sawyer, New Hampshire, 1992.
2. "Cellular receptors for advanced glycation endproducts," American Heart Association Meeting, Mini-Symposium in Thrombosis and Hemostasis, New Orleans, Louisiana, 1992.
3. "Cellular receptors for advanced glycation endproducts: implication for endothelial and monocyte dysfunction in the pathogenesis of vascular lesions," Atherosclerosis Symposium, University of Regensburg, Germany, 1993.
4. "Cellular receptors for glycated proteins: implications for vascular dysfunction in atherosclerosis and diabetes," FASEB meeting, New Orleans, Louisiana, 1993.

5. "Cellular receptors for advanced glycosylation endproducts: implications for vascular disease in diabetes," Scientific Conference on the Molecular Biology of the Vascular Wall, American Heart Association, Boston, Massachusetts, 1993.
6. "Cellular receptors for advanced glycation endproducts: implications for vascular disease in atherosclerosis and diabetes," Research Seminar, National Institutes of Aging, National Institutes of Health, Baltimore, Maryland, March, 1994.
7. "Cellular receptors for advanced glycation endproducts: implications for vascular dysfunction in atherosclerosis and diabetes," Grand Rounds, Department of Medicine, Columbia University College of Physicians and Surgeons, New York, New York, March, 1994.
8. "Atherosclerosis, aging and diabetes: common mechanisms," Minisymposium on Vascular Permeability, FASEB, Anaheim, California, April 1994.
9. "Glycated proteins and their receptors in vascular disease," Grand Rounds, Department of Cardiology, UCLA School of Medicine, Los Angeles, California, April 1994.
10. "Advanced Glycation Endproducts and their cellular receptor: implications for diabetic vascular disease, Endocrinology Grand Rounds, Department of Medicine, Columbia University College of Physicians and Surgeons, New York, New York, January, 1996.
11. "AGE-receptor interaction: implications for accelerated atherosclerosis observed in diabetes, Cardiology Grand Rounds, Department of Medicine, New York University School of Medicine, New York, New York, February, 1996.
12. "AGE-RAGE cellular interaction: implications for the development of diabetic complications," Nephrology Grand Rounds, Department of Medicine, Downstate Medical Center, Brooklyn, New York, May, 1996.
13. "RAGE in atherosclerosis and Alzheimer's disease," Clinical Research Seminars, Rockefeller University, New York, New York, June, 1996.
14. "RAGE: implications for complications of diabetes," Grand Rounds, Department of Medicine, Division of Nephrology, North Shore University Hospital, Manhasset, New York, September, 1996.



15. "AGE-RAGE interaction: implications for the development of diabetic complications," Grand Rounds, Department of Pediatrics, Columbia University College of Physicians and Surgeons, New York, New York, October, 1996.
16. "The receptor for advanced glycation endproducts: implications for the pathogenesis of diabetic complications," Scientific congress on the vascular endothelium: basic and clinical aspects, Pisa, Italy, November, 1996.
17. "Receptor for AGE, RAGE: implications for the biology of aging," National Institutes of Aging and the Glenn Foundation workshop on "Molecular aspects of age-related cardiovascular decline," Montecito, California, January, 1997.
18. "Interaction of Advanced Glycation Endproducts (AGEs) with their cellular receptor RAGE: implications for vascular and inflammatory cell dysfunction in diabetes," Symposium of the Baker Medical Research Institute on "Atherosclerosis and the Vessel Wall," Melbourne, Australia, February, 1997.
19. "Prevention of diabetic complications," 10th annual congress, Mexican Diabetes Federation, Aguascalientes, Mexico, March, 1997.
20. "Advanced Glycation Endproducts (AGEs) in diabetic periodontal disease," Sunstar Chapel Hill Symposium, Periodontal diseases and human health, Chapel Hill, North Carolina, March, 1997.
21. "RAGE and diabetic atherosclerosis," Annual Scholar's Day Program, Council for Tobacco Research, New York, New York, April, 1997.
22. "RAGE and the pathogenesis of diabetic complications," Seminar, Center for Transgene Technology and Gene Therapy, Leuven, Belgium, May, 1997.
23. "Interaction of glycated proteins with the vessel wall: implications for the pathogenesis of accelerated atherosclerosis in diabetes," 29th annual Hugh Lofland Conference on atherogenesis and the vessel wall, Honolulu, Hawaii, June, 1997.
24. "AGEs and RAGE: implications for the pathogenesis of diabetic complications," Invited speaker, Symposium on Endothelial Dysfunction in Diabetes, annual meeting, American Diabetes Association, Boston, Massachusetts, June, 1997.
25. "Interaction of Advanced Glycation Endproducts (AGEs) with their receptor RAGE: implications for the biology of aging,"

1997 World Congress of Gerontology, 16th Congress of the International Association of Gerontology, Adelaide, Australia, August, 1997.

26. "RAGE and vascular cell dysfunction," Juvenile Diabetes Foundation and European Association for the Study of Diabetes: Workshop on Diabetic Retinopathy, Oxford, England, September, 1997.
27. "Advanced Glycation Endproducts and RAGE: Implications for enhanced oxidant stress in the pathogenesis of complications in diabetes and beyond," 4th Kobe Study Group of Vascular Medicine: Cross Talk between NO and Oxygen Radicals, Kobe, Japan, September, 1997.
28. "Interaction of Advanced Glycation Endproducts with their cellular receptor RAGE: implications for the pathogenesis of complications in diabetes and beyond," Center for Blood Research, Harvard University, Boston, Massachusetts, September, 1997.
29. "Interaction of advanced glycation endproducts with their cellular receptors," Symposium, Diabetes and Endothelial Dysfunction, Lyon, France, October, 1997.
30. "AGEs and RAGE: Implications for the pathogenesis of diabetic complications," Grand Rounds, Department of Medicine, New York University School of Medicine, New York, New York, October, 1997.
31. "Selective Anti-thrombotic therapy without interfering with protective hemostasis: role of Factor IX/IXa," Frontiers in Translational and Clinical Research: Anti-Coagulation: Present and Future, Columbia University College of Physicians and Surgeons, New York, New York, November, 1997.
32. "AGEs and RAGE: Implications for the pathogenesis of complications in diabetes and beyond," Seminar, Department of Physiology and Cellular Biophysics, Columbia University College of Physicians and Surgeons, New York, New York, November, 1997
33. "AGEs and RAGE: Implications for the pathogenesis of complications in diabetes, atherosclerosis and beyond," Seminar, Novartis, Summit, New Jersey, December, 1997
34. "RAGE: A novel target for the therapy of complications in diabetes and beyond," Invited Scholar lecture, Department of Dermatology, Columbia University College of Physicians and Surgeons, New York, New York, January, 1998.

35. "AGEs and RAGE: Implications for vascular complications in diabetes," Keystone symposium on the Endothelium, Lake Tahoe, Nevada, March, 1998.
36. "Receptor for AGE: Implications for the pathogenesis of complications in diabetes," Diabetes Research Seminar, Case Western University School of Medicine, Cleveland, Ohio, May, 1998.
37. "Receptor for Advanced Glycation Endproducts (AGE) and implications for the pathogenesis of diabetic complications ", New York/New Jersey Molecular Biology Club, New Jersey Medical School, Newark, New Jersey, May, 1998.
38. "Active site-blocked Factor IXa in Cardiac Surgery," Cambridge Healthtech Institute symposium on novel anticoagulants, San Diego, California, May, 1998.
39. "Receptor for AGE (RAGE): Novel insights into Diabetes and Inflammation," Department of Pediatrics Grand Rounds, Columbia University College of Physicians and Surgeons, August, 1998.
40. "RAGE and the pathogenesis of vascular complications in diabetes," Xth International Vascular Biology meeting, Cairns, Australia, August, 1998.
41. "Heparin and its alternatives," Annual meeting, Extracorporeal Life Support Organization, San Antonio, Texas, September, 1998.
42. "Suppression of accelerated diabetic atherosclerosis by soluble RAGE (sRAGE)," The Vascular Endothelium: Basic and Clinical Aspects, Second International Congress, Pisa, Italy, October, 1998.
43. "AGE receptors and oxidative stress," Diabetic Complications Conference, Joint Symposium in celebration of the Joslin Diabetes Center's 100th anniversary, Boston, Massachusetts, October, 1998.
44. "Receptor for AGE, RAGE: Implications for chronic complications in diabetes and inflammation," Whitaker Cardiovascular Institute Seminar, Boston University School of Medicine, Boston, Massachusetts, January, 1999.
45. "Receptor for AGE (RAGE): "Novel Proinflammatory Ligands and Insights into Inflammation," Keystone Conference, Inflammatory Paradigms and the Vasculature, Santa Fe, New Mexico, February, 1999

46. "RAGE and implications for chronic complications in diabetes and inflammation," Bergen Community Regional Blood Center, Paramus, N.J., March, 1999.
47. "Receptor for AGE: implications for the pathogenesis of complications in diabetes and inflammation," New York Metro Pediatric Endocrine Society, N.Y., N.Y., April, 1999.
48. "Advanced Glycation Endproducts and atherosclerosis," FASEB summer conference on Thrombin and Vascular Medicine, Saxton River, Vermont, June, 1999.
49. "Receptor for AGE (RAGE): Implications for Vascular and Inflammatory Dysfunction in Diabetes and other Disorders," Gordon Research Conference on "Angiogenesis and Microcirculation," Salve Regina University, Newport, Rhode Island, August, 1999.
50. "Vascular and endothelial dysfunction in diabetes," Plenary session, The Fourth International Diabetes Federation, Western Pacific Region Congress, Sydney, Australia, August, 1999.
51. "Markers of vascular and endothelial dysfunction in diabetes," "Meet the Professor session," The Fourth International Diabetes Federation, Western Pacific Region Congress, Sydney, Australia, August, 1999.
52. "Present status of the AGE receptors: RAGE and future developments," ENGAGE meeting," European Association for the Study of Diabetes, Brussels, Belgium, September, 1999.
53. "Receptor for AGE (RAGE): Implications for chronic cellular dysfunction in diabetes, inflammation and tumor biology," Grand Rounds, Division of Rheumatology, Department of Medicine, New York University School of Medicine, October, 1999.
54. "The Molecular Pathogenesis of Diabetic Complications," Frontiers in Diabetes Research, The Naomi Berrie Diabetes Center, Columbia University, New York, New York, November, 1999.
55. "Role of Advanced Glycation End-products in the clinical complications of diabetes," Jubilee symposium in honour of Professor Bernard Jacotot, The French Atherosclerosis Society, Paris, France, November, 1999.

56. "Advanced Glycation Endproducts and their receptors," NIH/NIDCR-sponsored workshop on Diabetes and Oral Health, Washington, D.C., December, 1999.
57. "Advanced Glycation Endproducts and their Receptor RAGE: Implications for the pathogenesis of complications in diabetes, inflammation, Alzheimer's disease and cancer," Institute for Biochemistry, Justus-Liebig-University, Gießen, Germany, December, 1999.
58. "AGE-RAGE interaction: implications for the development of diabetic vasculopathy," Renal Grand Rounds, The New York Hospital Medical Center of Queens, " Queens, New York, March, 2000.
59. "Receptor for Advanced Glycation Endproducts (RAGE) and implications for diabetic complications, inflammation and tumor biology," Lung Biology Conference, Division of Pulmonary Medicine, Department of Medicine, Yale University School of Medicine, New Haven, Connecticut, March, 2000.
60. "Receptor for AGE (RAGE) is a gene within the major histocompatibility class III region: implications for host response mechanisms in homeostasis and chronic diseases," Immunology Seminar Program, College of Biological Sciences, Ohio State University School of Medicine, April, 2000.
61. "Receptor for AGE (RAGE) and implications for the pathogenesis of diabetic complications, inflammation and cancer," Distinguished Lecture, Department of Oral Biology, State University of New York at Buffalo School of Dentistry, Buffalo, New York, May, 2000.
62. "Receptor for AGE (RAGE) and implications for the pathogenesis of diabetic complications and inflammation," German Diabetes Association, Munich, Germany, May, 2000.
63. "Receptor for AGE: a multiligand receptor of the immunoglobulin superfamily with implications for the pathogenesis of diabetic complications and other disorders," Current Topics in Glycobiology, Helsinki, Finland, June, 2000.
64. "Blockade of RAGE, a New Approach to the Treatment of the Complications of Diabetes," Juvenile Diabetes Research Foundation, New York, New York, October, 2000.
65. "RAGE: updates on tumor biology and inflammation paradigms," Department of Medicine, Faculty Research Seminar, Columbia University, New York, New York, December, 2000.

66. "RAGE - a multiligand tale," Seminar, Naomi Berrie Diabetes Center, Columbia University, New York, New York, December, 2000.
67. "RAGE and peripheral nerve repair," Keystone Symposium on Neuronal and Vascular Stress: a New Window on Alzheimer's Disease, Durango, Colorado, January, 2001.
68. "RAGing against the complications of diabetes," Juvenile Diabetes Research Foundation International, Meeting of the Board of Directors, Tampa, Florida, February, 2001.
69. "RAGE and the complications of diabetes and inflammation," Seminar, Boston University Goldman School of Dental Medicine, Boston, Massachusetts, April, 2001.
70. "The Role of Advanced Glycation Endproducts (AGE) and their receptor RAGE in Diabetes, The Periodontal-Systemic Connection: A State of the Art Symposium, Sponsored by the NIDCR and the AAP, Bethesda, Maryland, April, 2001.
71. "RAGE: Updates on the Amyloidoses and Inflammation," Seminar, Department of Molecular Medicine, Weill-Cornell University Medical College, New York, New York, April, 2001.
72. "RAGE and the complications of diabetes: inflammatory overtones," 6th EASD/JDRF Oxford Workshop on the Molecular and Genetic Aspects of the Vascular Complications of Diabetes, Keble College, Oxford, UK, August, 2001.
73. "The Current RAGE of Diabetes," The Diabetes Summit: A New Patient Treatment Regimen in Cardiovascular Disease, Anaheim, California, November, 2001.
74. "RAGE and the Complications of Diabetes - Insights into Proinflammatory Mechanisms," Invited Speaker, Meeting of the Oral Biology, Immunology and Microbiology Research Group, Longboat Key, Florida, January, 2002.
75. "RAGE: Implications for Diabetic Complications and Beyond," Biochemical Pharmacology Discussion Group, New York Academy of Sciences, New York, New York, January, 2002.
76. "RAGE and the complications of diabetes and inflammation," Seminar, Department of Clinical Pharmacology, Department of Medicine, New York University School of Medicine, March, 2002.
77. "RAGE: insights into proinflammatory mechanisms in diabetes and immune/inflammatory disorders," Keystone Symposium,

"Inflammatory Paradigms and the Vasculature II," Steamboat Springs, Colorado, April, 2002.

78. "RAGE: insights into the pathogenesis of diabetic complications and beyond," Grand Rounds, Department of Medicine, College of Physicians & Surgeons, Columbia University, New York, New York, April, 2002.
79. "RAGE and the complications of diabetes," Keynote Lecture, Banting and Best Diabetes Centre Annual Scientific Day, University of Toronto, Toronto, Canada, May, 2002.
80. "RAGE blockade and implications for the treatment of diabetic complications, inflammation, neurodegenerative disorders and cancer: a quest for clinical translation," Grand Rounds, Department of Surgery, College of Physicians & Surgeons, Columbia University, New York, New York, June, 2002.
81. "AGE, RAGE and Animal Models of Diabetic Complications," Invited Speaker, Animal Models of Diabetic Complications, National Institutes of Diabetes, Digestive and Kidney Disease, Arlington, Virginia, August, 2002.
82. "Receptor for AGE (RAGE) and Implications for Diabetic Complications, Tumors and Beyond," Department of Medicine, Grand Rounds, University of Vermont, October, 2002.
83. "Receptor for AGE (RAGE): a quest for clinical translation," Seminars in Investigative Medicine, University of Vermont, October, 2002.
84. "Receptor for AGE (RAGE): Implications for Diabetic Complications, Tumors and Beyond, Seminar, Department of Biochemistry, University of Helsinki, Helsinki, Finland, October, 2002.
85. "Diabetic Vascular Oxidant Stress," Invited Presentation, Session on Molecular Mechanisms of Atherosclerotic Vascular Disease in type 2 Diabetes," Annual meeting of the American Heart Association, Chicago, Illinois, November, 2002.
86. "RAGE and the Vascular Complications of Diabetes," Invited Speaker, Alfediam (Association de Langue Francaise Pour L'Etude Du Diabete Et Des Maladies Metaboliques): Meeting on "Atherosclere et Diabete: Acquis et Defis", Pasteur Institute, Paris, France, December, 2002.
87. "RAGE, diabetes and the inflammatory response," Seminar, Division of Rheumatology, Department of Medicine, College of

Physicians & Surgeons, Columbia University, New York, New York, December, 2002.

88. "RAGE and the complications of diabetes and beyond," Seminar, Department of Microbiology and Immunology, University of Western Ontario, Ontario, Canada, January, 2003.
89. "RAGE and the complications of diabetes," Seminar, Naomi Berrie Diabetes Center, College of Physicians & Surgeons, Columbia University, New York, New York, February, 2003.
90. "Understanding Diabetes- It's All in the RAGE," Myocardial Reperfusion XVI: Concepts and Controversies," American College of Cardiology, Chicago, Illinois, March, 2003.
91. "RAGE-dependent mechanisms and metabolic imprinting in the pathogenesis of diabetic complications," 20th Anniversary Symposium, Metabolic Imprinting and the Long-Term Complications of Diabetes Mellitus: Bench to Bedside and Back, National Institutes of Health, Bethesda, Maryland, April, 2003.
92. "RAGE and the Complications of Diabetes," Seminar, Diabetes Research Center, Albert Einstein College of Einstein, Bronx, New York, April, 2003.
93. "RAGE and the complications of diabetes and inflammation," Invited Speaker, Symposium on "Evolving Epidemic of Diabetes and Vascular Disease," University of Virginia, Charlottesville, Virginia, May, 2003.
94. "RAGEing against the complications of diabetes," Invited speaker, Annual meeting of the Northern New Jersey/Rockland County Chapter of the Juvenile Diabetes Foundation International," Tenafly, New Jersey, June, 2003.
95. "RAGE and amplification of proinflammatory pathways in the immune response," Invited Speaker, Arthritis Research Conference, Arthritis Foundation, Keystone, Colorado, June, 2003.
96. "Insights into Pathogenic Mechanisms in Diabetic Atherosclerosis and Cardiac Dysfunction," 8th European Association for the Study of Diabetes/Juvenile Diabetes Research Foundation Oxford Workshop, Keble College, Oxford, United Kingdom, August, 2003.
97. "RAGE and vascular inflammation: insights into the vascular complications of diabetes," Workshop on Atherosclerosis-



Molecular Basis of an Inflammatory Disease, Casteel Vaalsbroek, Vaals/Aachen, Germany, September, 2003.

98. "RAGE: Moving to the Clinic for the Cardiovascular Complications of Diabetes," Workshop entitled: "Diabetic Complications: Progress through Animal Models," Sponsored by the National Institutes of Health (NIDDK, NHLBI, NINDS, NEI) & JDRFI, Bethesda, Maryland, October, 2003.
99. "Systemic Markers of Inflammation," Invited Speaker, Type 2 Diabetes, the Metabolic Syndrome and Obesity: Evolving the Paradigms, Mc Lean, Virginia, January, 2004.
100. "Interaction between aldose reductase and RAGE-AGE pathways in diabetic myocardium," Invited Speaker, International Polyol Pathway Conference, Kona, Hawaii, March, 2004.
101. "RAGing against the complications of diabetes: new directions and future therapies," Invited Speaker, International Polyol Pathway Conference, Kona, Hawaii, March, 2004.
102. "RAGE and the Complications of Diabetes and Beyond: Inflammation, Tumors and Innate Functions," Department of Biology Seminar, New York University, New York, New York, March, 2004.
103. "AGEs and RAGE as Therapeutic Targets in Diabetes," Invited Speaker, American Society of Hypertension, New York, New York, May, 2004.
104. "RAGE and the cardiovascular complications of diabetes," Grand Rounds, Division of Cardiology, Department of Medicine, Albert Einstein College of Medicine, Bronx, New York, May, 2004.
105. "All the RAGE," Invited Speaker, Session on Mechanisms of Vascular Wall Damage, 64th annual sessions of the American Diabetes Association, Orlando, Florida, June, 2004.
106. "RAGE: The Complications of Diabetes and Neurodegenerative Disorders: Mechanisms & Therapeutic Strategies," Grand Rounds, Invited Speaker, Department of Neurology, Columbia University Medical Center, New York, New York, June, 2004.
107. "Receptor for AGE (RAGE) is a multiligand receptor of the immunoglobulin superfamily: implications for modulation of the inflammatory response," Session on "Inflammation & Tissue Injury," 12th International Congress of Immunology and 4th Annual Conference of FOCIS (Federation of Clinical Immunology Societies), Montreal, Canada, July, 2004.

108. "Receptor for AGE (RAGE): a multiligand receptor of the immunoglobulin superfamily- implications for the pathogenesis of diabetic complications," Invited Speaker, Plenary Session, 8th International Symposium on the Maillard Reaction," Charleston, South Carolina, August, 2004.
109. "Receptor for Advanced Glycation Endproducts: Insights into the pathogenesis of diabetic complications," 5th Annual Rachmiel Levine Symposium: Advances in Diabetes Research-From Cell Biology to Cell Therapy, Los Angeles, California, October, 2004.
110. "RAGE Blockade: From Mice to Man- moving to the clinic," Advances in Translational Research, Columbia University Medical Center New York Presbyterian Hospital and the Science Office of the Embassy of Italy, New York, New York, October, 2004.
111. "RAGE: Diabetic Complications and the Inflammatory Response," Society for Biomaterials: "Biomaterials in Regenerative Medicine: The Advent of Combination Products," Philadelphia, Pennsylvania, October, 2004.
112. "AGE, RAGE & Diabetic Complications," The Pfizer Carousel of Hope Diabetes Symposium on "Inflammation: Cause And Consequence of Diabetes and Vascular Complications," Beverly Hills, California, October, 2004.
113. "RAGE: Implications for Diabetic Complications, Inflammation, Neurodegeneration and Tumors," Biogen, Inc., Boston, Massachusetts, November, 2004.
114. "RAGE & the Cardiovascular Complications of Diabetes," Invited Speaker, Session on Diabetes and Cardiovascular Disease, Annual Meeting of the American Heart Association, November, 2004.
115. "Glycation, Inflammation and the Complications of Diabetes: The RAGE Connection," Endocrinology Canada International Symposium, The Science of Diabetes Complications, Implications for Novel Therapy, Toronto, Canada, November, 2004.
116. "RAGE & the Complications of Diabetes, Inflammation and Cancer," Department of Anesthesia Case Conference and Guest Lecture Series, Columbia University, New York, New York, January, 2005.